HITACHI

PA | No. 0145

60DX10B 50GX30B
50DX10B 43GX10B

SERVICE MANUAL

NTSC | HP11 HP12 Chassis

R/C: CLU-4311UG

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CAUTION: These servicing instructions are for use by qualified service personnel only. To reduce the risk of electric shock do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so. Before servicing this chassis, it is important that the service technician read the “IMPORTANT SAFETY INSTRUCTIONS” in this service manual.

SAFETY NOTICE
USE ISOLATION TRANSFORMER WHEN SERVICING

Components having special safety characteristics are identified by a ⚠ on the schematics and on the parts list in this Service Data and its supplements and bulletins. Before servicing the chassis, it is important that the service technician read and follow the “Important Safety Instructions” in this Service Manual.

SPECIFICATIONS AND PARTS ARE SUBJECT TO CHANGE FOR IMPROVEMENT

PROJECTION COLOR TELEVISION

APRIL 2001 HHEA-MANUFACTURING DIVISION

IMPORTANT SAFETY INSTRUCTIONS
USE ISOLATION TRANSFORMER WHEN SERVICING

Components having special safety characteristics are identified by a ⚠ on the schematics and on the parts list in this service manual and its supplements and bulletins. Before servicing this chassis, it is important that the service technician read and follow the “Important Safety Instructions” in this Service Manual.

For continued X-Radiation protection, replace picture tube with original type or Hitachi approved equivalent type.

This Service Manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING

Lead in solder used in this product is listed by the California Health and Welfare agency as a known reproductive toxicant which may cause birth defects or other reproductive harm (California Health and Safety Code, Section 25249.5).

When servicing or handling circuit boards and other components which contain lead in solder, avoid unprotected skin contact with solder. Also, when soldering do not inhale any smoke or fumes produced.

This television receiver provides display of television closed captioning in accordance with section 15.119 of the FCC rules.

FEDERAL COMMUNICATIONS COMMISSION NOTICE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/television technician for help.

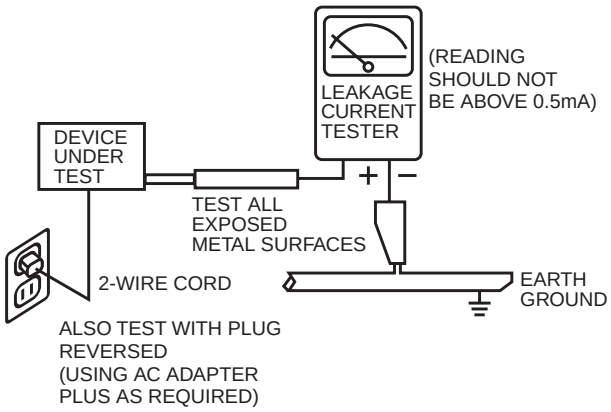
IMPORTANT SAFETY INSTRUCTION

1. Before returning an instrument to the customer, always make a safety check of the entire instrument, including but not limited to the following items.
   a. Be sure that no built-in protective devices are defective and/or have been deleted during servicing. (1) Protective shields are provided on this chassis to protect both the technician and the customer. Correctly replace all missing protective shields, including any removed for servicing convenience. (2) When reinstalling the chassis and/or other assembly in the cabinet, be sure to put back in place all protective devices, including but not limited to, nonmetallic control knobs, insulating fishpaper, adjustment and compartment covers/shields, and isolation resistor/capacitor networks. **Do not operate this instrument or permit it to be operated without all protective devices correctly installed and functioning. Servicers who defeat safety features or fail to perform safety checks may be liable for any resulting damage.**

   b. Be sure that there are no cabinet openings through which an adult or child might be able to insert their fingers and contact a hazardous voltage. Such openings include, but are not limited to (1) spacing between the picture tube and cabinet mask, (2) excessively wide cabinet ventilation slots, and (3) an improperly fitted and/or incorrectly secured cabinet back cover.

   c. **Antenna Cold Check** – With the instrument AC plug removed from any AC source, connect an electrical jumper across the two AC plug prongs. Place the instrument AC switch in the on position. Connect one lead of an ohmmeter to the AC plug prongs tied together and touch the other ohmmeter lead in turn to each tuner antenna input, exposed terminal screw and, if applicable, to the coaxial connector. If the measured resistance is less than 1.0 megohms or greater than 5.2 megohms, an abnormality exists that must be corrected before the instrument is returned to the customer. Repeat this test with the instrument AC switch in the off position.

   d. **Leakage Current Hot Check** – With the instrument completely reassembled, plug the AC line cord directly into a 120V AC outlet. (Do not use an isolation transformer during this test.) Use a leakage current tester or a metering system that complies with American National Standards Institute (ANSI) C101.0 Leakage Current for Appliances and Underwriters Laboratories (UL) 1410, (50.7). With the instrument AC switch first in the on position and then in the off position, measure from a known earth ground (metal waterpipe, conduit, etc.) to all exposed metal parts of the instrument (antennas, handle bracket, metal cabinet, screw heads, metallic overlays, control shafts, etc.), especially any exposed metal parts that offer an electrical return path to the chassis. Any current measured must not exceed 0.5 milliamps. Reverse the instrument power cord plug in the outlet and repeat test.



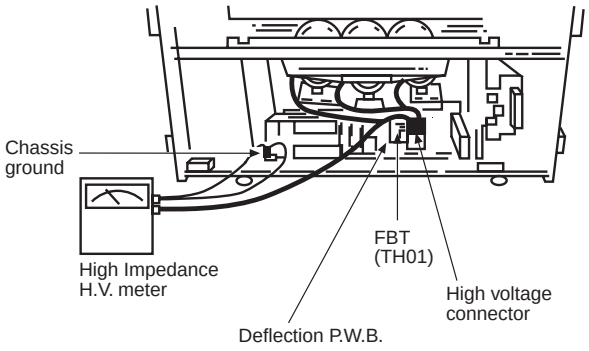
AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS SPECIFIED HEREIN INDICATE A POTENTIAL SHOCK HAZARD THAT MUST BE ELIMINATED BEFORE RETURNING THE INSTRUMENT TO THE CUSTOMER OR BEFORE CONNECTING THE ANTENNA OR ACCESSORIES.

e. **High Voltage —** This receiver is provided with a hold down circuit for clearly indicating that voltage has increased in excess of a predetermined value. Comply will all notes described in this Service Manual regarding this hold down circuit when servicing, so that this hold down circuit may correctly be operated.

f. **Service Warning —** With maximum contrast, operating high voltage in this receiver is lower than **31.5 kV.** In case any component having influence on high voltage is replaced, confirm that the high voltage with maximum contrast is lower than **31.5 kV.**
To measure H.V. use a high impedance H.V. meter. Connect (-) to chassis earth and (+) to the CRT anode button. (See the following connection diagram.)

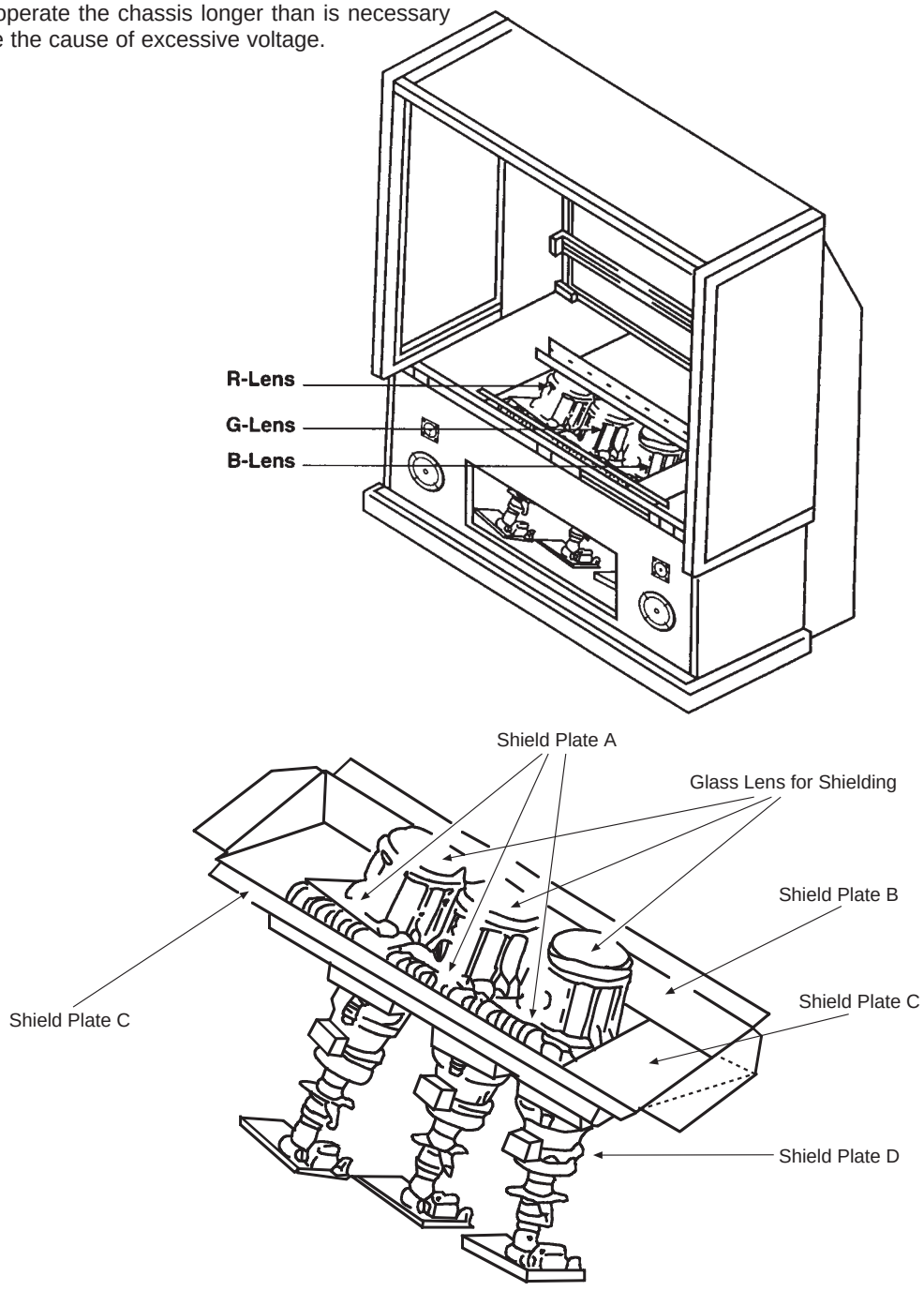
Note: Turn power switch off without fail before the connection to the anode button is made.



IMPORTANT SAFETY INSTRUCTIONS

g. **X-radiation – TUBE:** The primary source of X-radiation in this receiver is the picture tube. The tube utilized for the above mentioned function in this chassis is specially constructed to limit X-radiation emissions.
For continued X-radiation protection, the replacement tube must be the same type as the original, Hitachi approved type.
When troubleshooting and making test measurements in a receiver with a problem of excessive high voltage, avoid being unnecessarily close to the picture tube and the high voltage component.
Do not operate the chassis longer than is necessary to locate the cause of excessive voltage.

h. **X-radiation Shield –**
1. This receiver is provided with X-ray shield plates for protection against X-radiation. Do not remove X-ray shield plates A, B, or C shown in Fig. 1 unnecessarily, when troubleshooting and/or making test measurements.
2. To prevent X-radiation, after replacement of picture tube and lens, confirm these components to be fixed correctly to bracket and cabinet, and not to be taken off easily.



Detailing X-radiation shield

Fig. 1. Installation of shield lens, shield cover and shield plates (oblique view).

IMPORTANT SAFETY INSTRUCTIONS

2. Read and comply with all caution and safety-related notes on or inside the receiver cabinet, on the receiver chassis, or on the picture tube.

3. **Design Alteration Warning** – Do not alter or add to the mechanical or electrical design of this TV receiver. Design alterations and additions including but not limited to circuit modifications and the addition of items such as auxiliary audio and/or video output connectors, might alter the safety characteristics of this receiver and create a hazard to the user. Any design alterations or additions may void the manufacturer's warranty and may make you, the servicer, responsible for personal injury or property damage resulting therefrom.

4. **Picture Tube Implosion Protection Warning** – The picture tube in this receiver employs integral implosion protection. For continued implosion protection, replace the picture tube only with one of the same type number. Do not remove, install, or otherwise handle the picture tube in any manner without first putting on shatterproof goggles equipped with side shields. People not so equipped must be kept safely away while picture tubes are handled. Keep the picture tube away from your body. Do not handle the picture tube by its neck.

5. **Hot Chassis Warning** – **a.** Some TV receiver chassis are electrically connected directly to one conductor of the AC power cord and may be safely serviced without an isolation transformer only if the AC power plug is inserted so that the chassis is connected to the ground side of the AC power source. Confirm that the AC power plug is inserted correctly with an AC voltmeter by measuring between the chassis and a known earth ground. If a voltage reading in excess of 1.0V is obtained, remove and reinsert the AC power plug in the opposite polarity and again measure the voltage potential between the chassis and a known earth ground. **b.** Some TV receiver chassis normally have 85V AC (RMS) between chassis and earth ground regardless of the AC plug polarity. These chassis can be safely serviced only with an isolation transformer inserted in the power line between the receiver and the AC power source, for both personnel and test equipment protection. c. Some TV receiver chassis have a secondary ground system in addition to the main chassis ground. This secondary ground system is not isolated from the AC power line. The two ground systems are electrically separated by insulating material that must not be defeated or altered.

6. Observe original lead dress. Take extra care to assure correct lead dress in the following areas: **a.** near sharp edges, **b.** near thermally hot parts – be sure that leads and components do not touch thermally hot parts, **c.** the AC supply, **d.** high voltage and **e.** antenna wiring. Always inspect in all areas for pinched, out-of-plate, or frayed wiring. Do not change spacing between components and the printed circuit board. Check AC power cord for damage.

7. Components, parts, and/or wiring that appear to have overheated or are otherwise damaged should be replaced with components, parts, or wiring that meet original specifications. Additionally, determine the cause of overheating and/or damage and, if necessary, take corrective action to remove any potential safety hazard.

8. **PRODUCT SAFETY NOTICE** – Many TV electrical and mechanical parts have special safety-related characteristics some of which are often not evident from visual inspection, nor can the protection they give necessarily be obtained by replacing them with components rated for higher voltage, wattage, etc. Parts that have special safety characteristics are identified in Hitachi service data by shading on schematics and by a ⚠ in the parts list. Use of substitute replacement that does not have the same safety characteristics as the recommended replacement part in Hitachi service data parts list might create shock, fire, and/or other hazards. Product safety is under review continuously and new instructions are issued whenever appropriate. For the latest information, always consult the appropriate current Hitachi service literature. A subscription to, or additional copies of service literature may be obtained at a nominal charge from Hitachi.

SERVICING PRECAUTIONS

CAUTION: Before servicing instruments covered by this service data and its supplements and addenda, read and follow the "Important Safety Instructions" on page 3 of this publication.

NOTE: If unforeseen circumstances create conflict between the following servicing precautions and any of the safety precautions on page 3 of this publication, always follow the safety precautions. Remember: Safety First.

General Servicing Guidelines

1. Always unplug the instrument AC power cord from the AC power source before:
   a. Removing or reinstalling any component, circuit board, module, or any other instrument assembly.

   b. Disconnecting or reconnecting any instrument electrical plug or other electrical connection.

   c. Connecting a test substitute in parallel with an electrolytic capacitor in the instrument.
      CAUTION: A wrong part substitution or incorrect polarity installation of electrolytic capacitors may result in an explosion hazard.

   d. Discharging the picture tube anode.

2. Test high voltage only by measuring it with an appropriate high voltage meter or other voltage measuring device (DVM, FETVOM, etc.) equipped with a suitable high voltage probe. Do not test high voltage by "drawing an arc." The H.V. Distribution Box has an internal 400MW resistor (bleeder resistor) connected from the high voltage to ground. After power is removed from the instrument the high voltage will discharge through the high voltage bleeder resistor. If the tubes have high voltage after power is removed, then the bleeder resistor is defective or the bleeder ground is disconnected.

3. Discharge the picture tube's anode at any of the R, G, or B outputs on the H.V. Distribution Box only by (a) first connecting one end of an insulated clip lead to the degaussing or kine aquadag grounding system shield at the point where the picture tube socket ground lead is connected, and then (b) touch the other end of the insulated clip lead to the picture tube high voltage distribution box R, G, or B output, using an insulated handle to avoid personal contact with high voltage.

4. Do not spray chemicals on or near this instrument or any of its assemblies.

5. Unless specified otherwise in these service data, clean electrical contracts by applying the following mixture to the contacts with a pipe cleaner, cotton-tipped stick or comparable nonabrasive applicator: 10% (by volume) Acetone and 90% (by volume) isopropyl alcohol (90%-99% strength).
   CAUTION: This is a flammable mixture. Unless specified otherwise in these service data, lubrication of contacts is not required.

6. Do not defeat any plug/socket B+ voltage interlocks with which instruments covered by this service data might be equipped.

7. Do not apply AC power to this instrument and/or any of its electrical assemblies unless all solid-state device heat-sinks are correctly installed.

8. Always connect the test instrument ground lead to the appropriate instrument chassis ground before connecting the test instrument positive lead. Always remove the test instrument ground lead last.

9. Use with this instrument only the test fixtures specified in this service data.
   CAUTION: Do not connect the test fixture ground strap to any heatsink in this instrument.

Electrostatically Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential shock reasons prior to applying power to the unit under test.

2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.

3. Use only a grounded-tip soldering iron to solder or desolder ES devices.

4. Use only can anti-static type solder removal device. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ES device.

5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.

6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material.)

7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.
   CAUTION: Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate

General Soldering Guidelines

1. Use a grounded-tip, low-wattage soldering iron and appropriate tip size and shape that will maintain tip temperature within the range 500°F to 600°F.

2. Use an appropriate gauge of resin-core solder composed of 60 parts tin/40 parts lead.

3. Keep the soldering iron tip clean and well-tinned.

4. Thoroughly clean the surfaces to be soldered. Use a small wire-bristle (0.5 inch or 1.25 cm) brush with a metal handle. Do not use freon-propelled spray-on cleaners.

5. Use the following desoldering technique.
   a. Allow the soldering iron tip to reach normal temperature (500°F to 600°F).

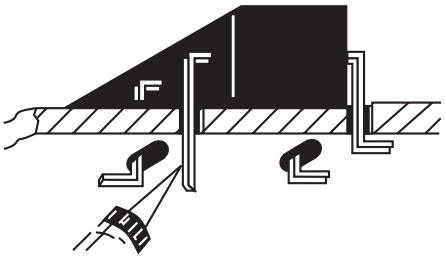
   b. Heat the component lead until the solder melts. Quickly draw away the melted solder with an anti-static, suction-type solder removal device or with solder braid.
      CAUTION: Work quickly to avoid overheating the circuit board printed foil.

6. Use the following soldering technique.
   a. Allow the soldering iron tip to reach normal temperature (500°F to 600°F).

   b. First, hold the soldering iron tip and solder strand against the component lead until the solder melts.

   c. Quickly move the soldering iron tip to the junction of the component lead and the printed circuit foil, and hold it there only until the solder flows onto and around both the component lead and the foil.
      CAUTION: Work quickly to avoid overheating the circuit board printed foil or components.

   d. Closely inspect the solder area and remove any excess or splashed solder with a small wire-bristle brush.



Use Solding Iron to Pry Leads

IC Removal/Replacement

Some Hitachi unitized chassis circuit boards have slotted holes (oblong) through which the IC leads are inserted and then bent flat against the circuit foil. When holes are the slotted type, the following technique should be used to remove and replace the IC. When working with boards using the familiar round hole, use the standard technique as outlined in paragraphs 5 and 6 above.

Removal

1. Desolder and straighten each IC lead in one operation by gently prying up on the lead with the soldering iron tip as the solder melts.

2. Draw away the melted solder with an anti-static suction-type solder removal device (or with solder braid) before removing the IC.

Replacement

1. Carefully insert the replacement IC in the circuit board.

2. Carefully bend each IC lead against the circuit foil pad and solder it.

3. Clean the soldered areas with a small wire-bristle brush. (It is not necessary to reapply acrylic coating to areas.)

"Small-signal" Discrete Transistor Removal/Replacement

1. Remove the defective transistor by clipping its leads as close as possible to the component body.

2. Bend into a "U" shape the end of each of three leads remaining on the circuit board.

3. Bend into a "U" shape the replacement transistor leads.

4. Connect to replacement transistor leads to the corresponding leads extending from the circuit board and crimp the "U" with long nose pliers to insure metal to metal contact, then solder each connection.

Power Output Transistor Devices Removal/Replacements

1. Heat and remove all solder from around the transistor leads.

2. Remove the heatsink mounting screw (if so equipped).

3. Carefully remove the transistor from the circuit board.

4. Insert new transistor in circuit board.

5. Solder each transistor lead, and clip off excess lead.

6. Replace heatsink.

Diode Removal/Replacement

1. Remove defective diode by clipping its leads as close as possible to diode body.

2. Bend the two remaining leads perpendicularly to the circuit board.

3. Observing diode polarity, wrap each lead of the new diode around the corresponding lead on the circuit board.

4. Securely crimp each connection and solder it.

5. Inspect (on the circuit board copper side) the solder joints of the two "original leads". If they are not shiny, reheat them and, if necessary, apply additional solder.

Fuses and Conventional Resistor Removal/Replacement

1. Clip each fuse or resistor lead at top of circuit board hollow stake.

2. Securely crimp leads of replacement component around stake 1/8 inch from top.

3. Solder the connections.
   CAUTION: Maintain original spacing between the replaced component and adjacent components and the circuit board, to prevent excessive component temperatures.

Circuit Board Foil Repair

Excessive heat applied to the copper foil of any printed circuit board will weaken the adhesive that bonds the foil to the circuit board, causing the foil to separate from, or "lift-off," the board. The following guidelines and procedures should be followed whenever this condition is encountered.

In Critical Copper Pattern Areas

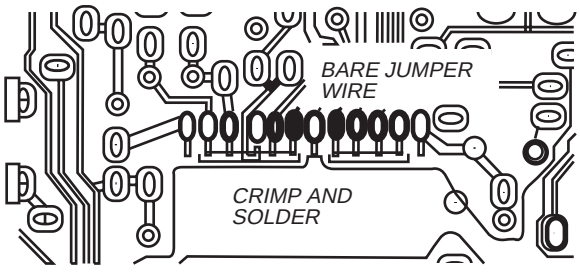
High component/copper pattern density and/or special voltage/current characteristics make the spacing and integrity of copper pattern in some circuit board areas more critical than in others. The circuit foil in these areas is designated as Critical Copper Pattern. Because Critical Copper Pattern requires special soldering techniques to ensure the maintenance of reliability and safety standards, contact your Hitachi personnel.

At IC Connections

To repair defective copper pattern at IC connections, use the following procedure to install a jumper wire on the copper pattern side of the circuit board. (Use this technique only on IC connections.)

1. Carefully remove the damaged copper pattern with a sharp knife. (Remove only as much copper as absolutely necessary.)

2. Carefully scratch away the solder resist and acrylic coating (if used) from the end of the remaining copper pattern.



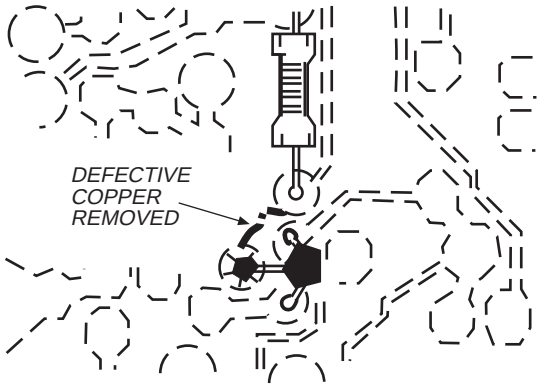
Install Jumper Wire and Solder

3. Bend a small "U" in one end of a small-gauge jumper wire and carefully crimp it around the IC pin. Solder the IC connection.

4. Route the jumper wire along the path of the cut-away copper pattern and let it overlap the previously scraped end of the good copper pattern. Solder the overlapped area, and clip off any excess jumper wire.

At Other Connections

Use the following technique to repair defective copper pattern at connections other than IC Pins. This technique involves the installation of a jumper wire on the component side of the circuit board.



Insulated Jumper Wire

1. Remove the defective copper pattern with a sharp knife. Remove at least 1/4 inch of copper, to ensure hazardous condition will not exist if the jumper wire opens.

2. Trace along the copper pattern from both wire sides of the pattern break and locate the nearest component directly connected to the affected copper pattern.

3. Connect insulated 20-gauge jumper wire from the nearest component on one side of the pattern break to the lead of the nearest component on the other side.
   Carefully crimp and solder the connections.
   CAUTION: Be sure the insulated jumper wire is dressed so that it does not touch components or sharp edges.

Frequency Synthesis (FS) Tuning Systems

1. Always unplug the instrument AC power cord before disconnecting or reconnecting FS tuning system cables and before removing or inserting FS tuning system modules.

2. The FS tuner must never be disconnected from the FS tuning control module while power is applied to the instrument.

3. When troubleshooting intermittent problems that might be caused by defective cable connection(s) to the FS tuning system, remove the instrument AC power as soon as the defective connector is found and finish confirming the bad connection with a continuity test. This procedure will reduce the probability of electrical overstress of the FS system semi-conductor components.

NOTE: ***These components are affixed with glue. Be careful not to break or damage any foil under the component or at the pins of the ICs when removing. Usually applying heat to the component for a short time while twisting with tweezers will break the component loose.***

Leadless Chip Components (surface mount)

Chip components must be replaced with identical chips due to critical foil track spacing. There are no holes in the board to mount standard transistors or diodes. Some chip capacitor or resistor board solder pads may have holes through the board, however the hole diameter limits standard resistor replacement to 1/8 watt. Standard capacitors may also be limited for the same reason. It is recommended that identical chip components be used. .

Chip resistors have a three digit numerical resistance code -1st and 2nd significant digits and a multiplier. Example: 162 = 1600 or 1.6KΩ resistor, 0 = 0Ω (jumper).

Chip capacitors generally do not have the value indicated on the capacitor. The color of the component indicates the general range of the capacitance.

Chip transistors are identified by a two letter code. The first letter indicates the type and the second letter, the grade of transistor.

Chip diodes have a two letter identification code as per the code chart and are a dual diode pack with either

common anode or common cathode. Check the parts list for correct diode number.

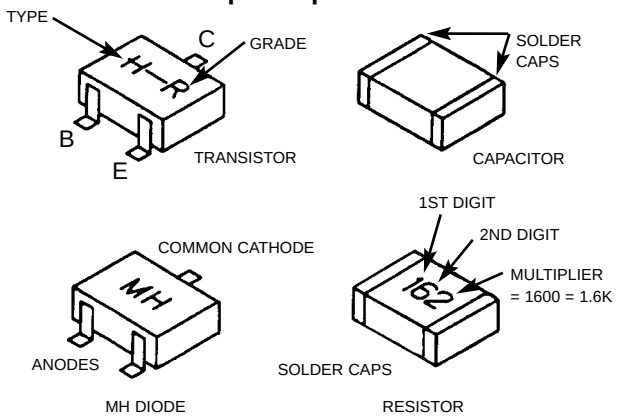
Component Removal

1. Use solder wick to remove solder from component end caps or terminals.
2. Without pulling up, carefully twist the component with tweezers to break the adhesive.
3. Do not reuse removed leadless or chip components since they are subject to stress fracture during removal .

Chip Component Installation

1. Put a small amount of solder on the board soldering pads.
2. Hold the chip component against the soldering pads with tweezers or with a miniature alligator clip and apply heat to the pad area with a 30 watt iron until solder flows. Do not apply heat for more than 3 seconds

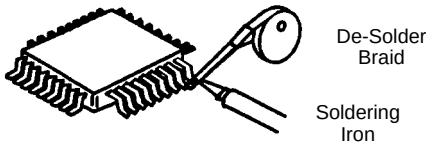
Chip Components



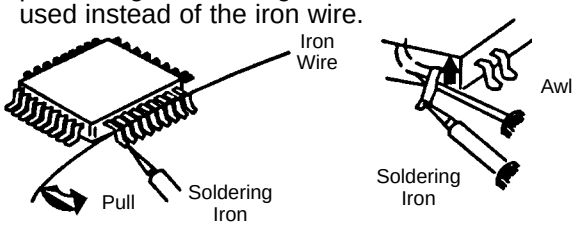
How to Replace Flat-IC —Required Tools—

- Soldering iron
- De-solder braids
- iron wire or small awl
- Magnifier

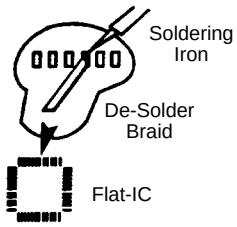
1. Remove the solder from all of the pins of a Flat-IC by using a de-solder braid.



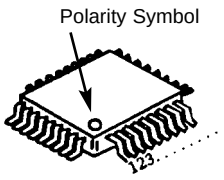
2. Put the iron wire under the pins of the Flat-IC and pull it in the direction indicated while heating the pins using a soldering iron. A small awl can be used instead of the iron wire.



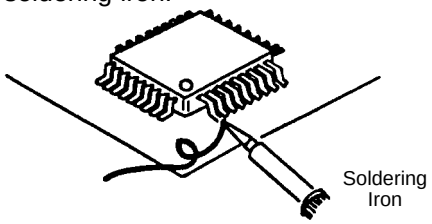
3. Remove the solder from all of the pads of the Fiat-IC by using a de-solder braid.



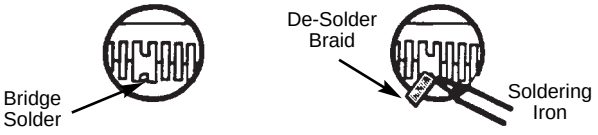
4. Position the new Flat-IC in place (apply the pins of the Flat-IC to the soldering pads where the pins need to be soldered). Properly determine the positions of the soldering pads and pins by correctly aligning the polarity symbol.



5. Solder all pins to the soldering pads using a fine tipped soldering iron.



6. Check with a magnifier for solder bridge between the pins or for dry joint between pins and soldering pads. To remove a solder bridge, use a de-solder braid as shown in the figure below.



TECHNICAL CAUTIONS

High Voltage limiter circuit operation check.

1. Turn off TV and connect jig as shown in Figure 2.
2. Set the AC input to 120V AC and turn on TV.
3. Confirm test pattern on CRT is a usable picture, then slowly adjust jig until the picture disappears and TV shuts down.
4. When the limiter circuit is operating properly, High Voltage will be less than 31.5 kV at 1.7mA when TV shuts down.
5. Turn off set immediately after checking circuit operation.
6. Unplug set for one minute to reset shutdown circuit. Remove jig and voltmeter.

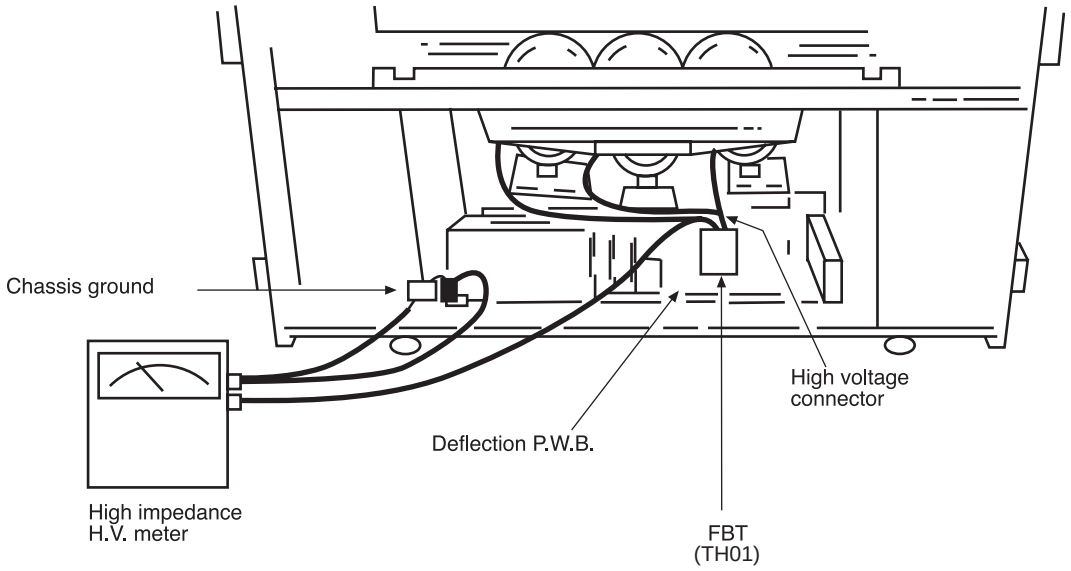


Figure 2

SPECIFICATIONS

Model: 60DX10B 43GX10B
50DX10B 43GX10B

Cathode-Ray Tube:
50GX30B/43GX10B R=P16LM00EURFA
60DX10B/50DX10B G=P16LFM00EUHHA
B=P16LFM00EUBMB

Power Input: 120 volts AC, 60 Hz

Power Consumption: 189 Watts - Maximum
149 Watts - Operating
1.7 Watts - Stand-by

Antenna Impedance: 75 Ohm Unbalanced
VHF / UHF / CATV

Receiving Channel:

BAND	CH
VHF	2~13
UHF	14~69
EXT. Mid	(A-5)~(A-1), 4+
CATV Mid.	A~I
CATV Super	J~W
CATV Hyper	(W+1)~(W+28)

Intermediate Frequency: Picture I-F Carrier 45.75 MHz
Sound I-F Carrier 41.25 MHz
Color Sub Carrier 42.17 MHz

Video Input: 1 Volt p-p, 75 Ohm
1 Volt p-p, 75 Ohm (Y)
0.7 Volt p-p, 75 Ohm, (P_B, P_R)

Video Output: 1 Volt p-p, 75 ohm

Audio Input: 470 mVrms, 47 k Ohm

Stereo Audio Output: 470 mVrms, 1 k Ohm

Audio Output Power:
Front: 12 watts per channel at 10% distortion,
8 ohm Impedance. Max output – 15 watts.

Anode Voltage:
29.5±1.5kv (1.35±0.2mA)

Brightness:	**43GX10B**	**50DX10B**	**60DX10B**
(white screen)	250cd/m^2	205cd/m^2	140cd/m^2

Speakers: 2 Front Speakers

Dimension:

	43GX10B	50DX10B/ 50GX30B	60DX10B
Height (in.)	43 $^3/_4$	52	60 $^1/_2$
Width (in.)	39	43 $^1/_4$	61 $^1/_2$
Depth (in.)	20	23 $^1/_2$	26 $^3/_4$
Weight (lbs.)	143	183	233

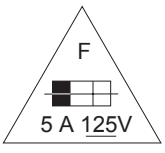
Circuit Board Assemblies:

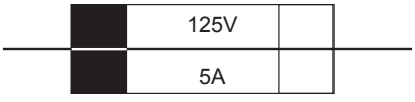
C.P.T. (B) P.W.B.	Terminal P.W.B.
C.P.T. (G) P.W.B.	VM P.W.B.
C.P.T. (R) P.W.B.	Power/Deflection P.W.B.
Control P.W.B.	Control Sub P.W.B.
Signal P.W.B.	Sensor Distribution P.W.B.
Covergence P.W.B.	Trusur/SRS/BBE P.W.B.

CIRCUIT PROTECTION

CAUTION: Below is an EXAMPLE only. See Replacement Parts List for details. The following symbol near the fuse indicates fast operation fuse (to be replaced). Fuse ratings appear within the symbol.

Example:



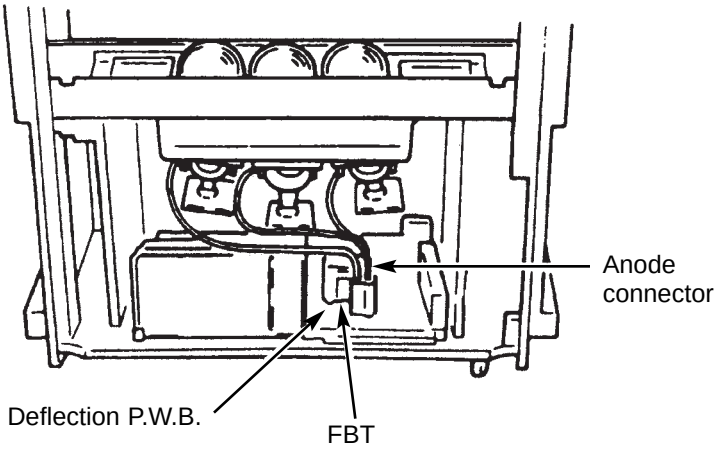


RISK OF FIRE - REPLACE FUSE AS MARKED

The rating of fuse F901 is 5A - 125V.
Replace with the same type fuse for continued protection against fire.

CAUTIONS WHEN CONNECTING / DISCONNECTING THE HV CONNECTOR

Perform the following when the HV connector (anode connector) is removed or inserted for CPT replacement, etc.



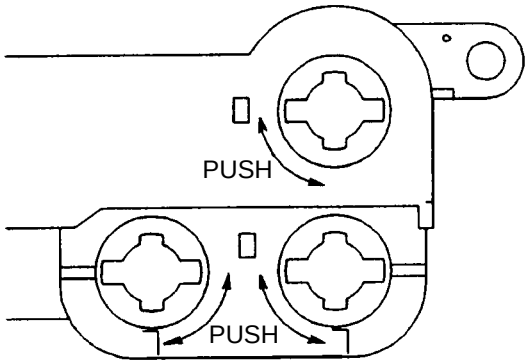


Fig. A

During Removal

1. Roll out silicon cover from FBT's contact area slowly.
2. While turning the connector about 90 degrees following the arrow (0 position), push the connector slightly towards the case. (Fig. A)
3. Remove the connector slowly by pulling it away from the case.

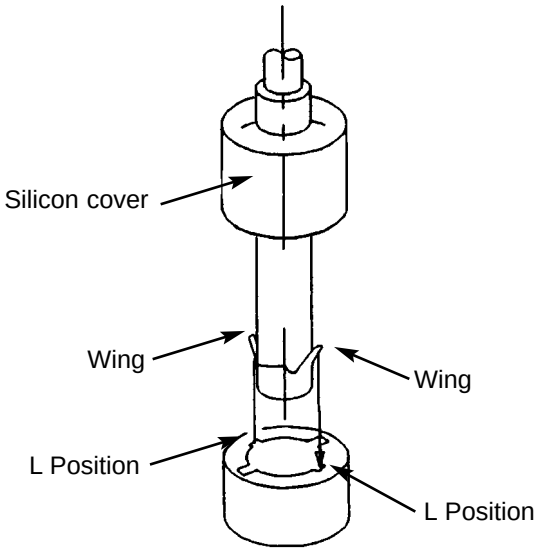


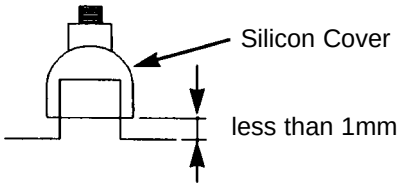
Fig. B

During Insertion

1. Please refer to direction for insertion as shown in Fig. B (L position). Insert connector until "CLICK" sound is heard.
2. Make sure the connector is pressed right in, so that it has a good contact with the spring.
3. Confirm the contact by pulling the connector slightly. (Don't pull hard because it may damage the connector).
4. Cover the high voltage output by carefully pushing silicon cover onto it. (Don't turn the connector).

(REMARK)

1. Make sure the silicon cover is covering the high voltage output.



GENERAL INFORMATION

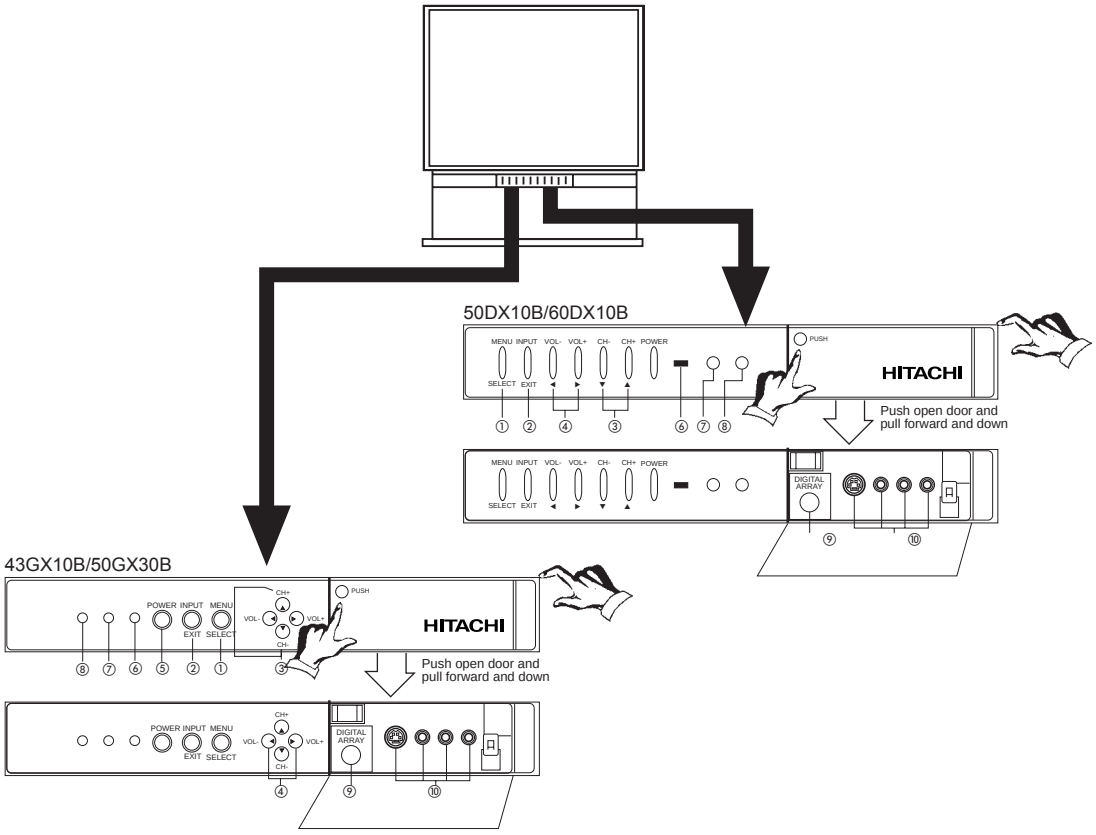


Fig. 3. Front Control Panel

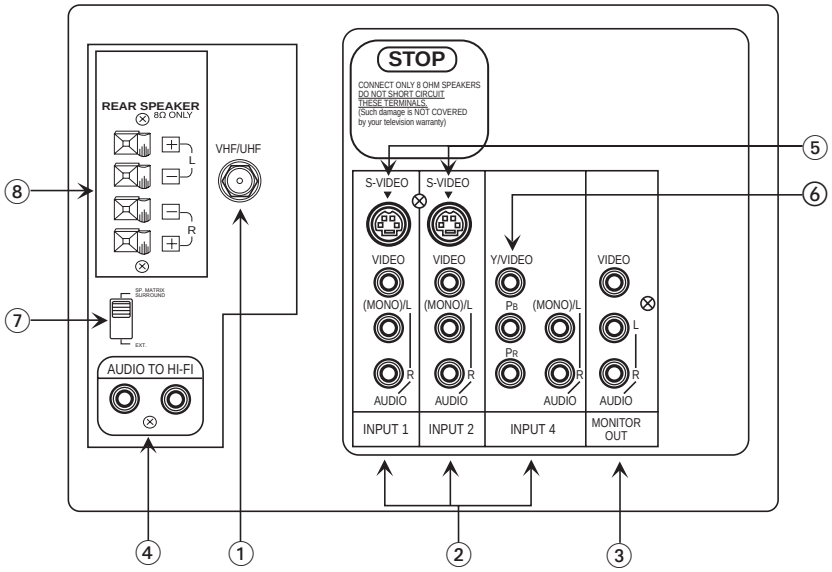


Fig. 4. Rear Panel Jacks

① Antenna Input/Output

② Audio/Video Inputs 1, 2

③ Monitor Out

④ Audio to Hi-Fi

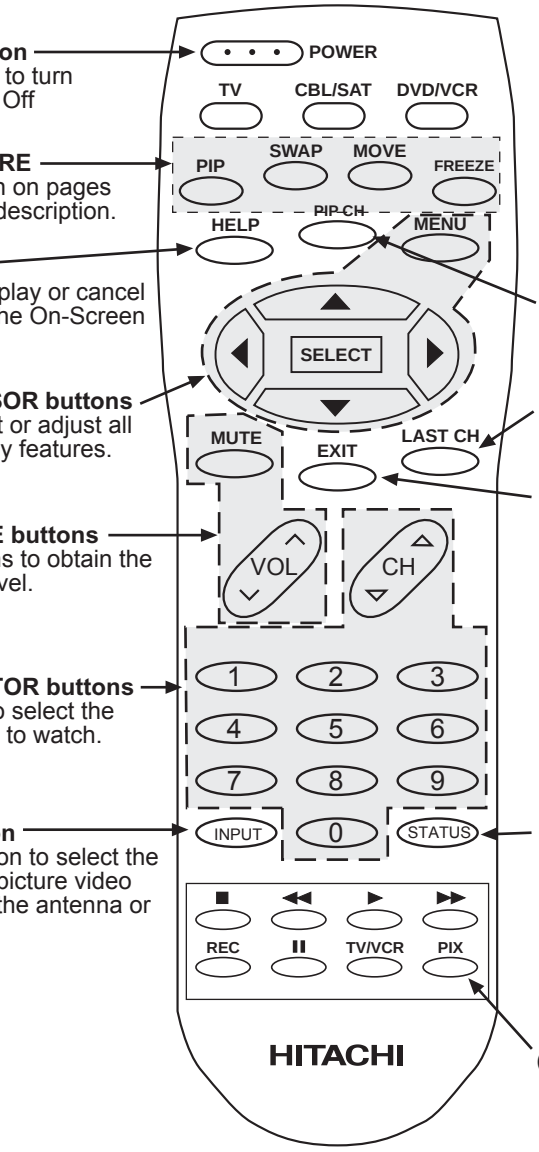
⑤ S-Video Inputs 1 and 2

⑥ Component Input Y-P_BP_R

⑦ Speaker Matrix Surround Switch

⑧ Rear Speaker Terminals

USE THE REMOTE TO CONTROL YOUR TV



① **TV POWER button**
Press this button to turn the TV set On or Off

⑧ **PICTURE-IN-PICTURE**
See separate section on pages 23-25 for a detailed description.

⑪ **HELP button**
Press this button to display or cancel the help messages of the On-Screen Display.

③ **SELECT, MENU, CURSOR buttons**
Use these buttons to set or adjust all of the On-Screen Display features.

⑦ **VOLUME, MUTE buttons**
Use these buttons to obtain the desired sound level.

④ **CHANNEL SELECTOR buttons**
Use these buttons to select the CHANNEL you wish to watch.

⑥ **INPUT button**
Use this button to select the main or sub-picture video source from the antenna or video inputs.

⑨ **PIP CH button**
Use this button to select between main picture and sub-picture tuning.

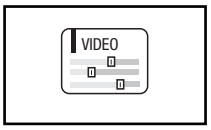
⑤ **LAST CHANNEL (LAST CH) button**
Use this button to select between the last two channels viewed.

⑩ **EXIT button**
Use this button to exit all On-Screen Display menus.

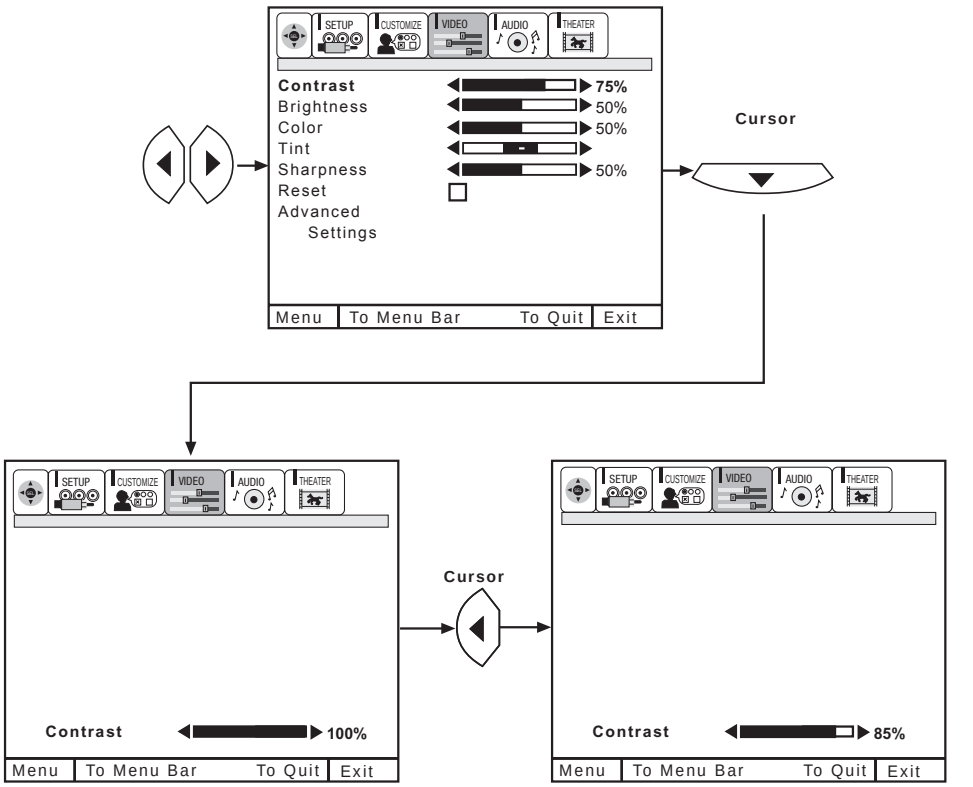
② **STATUS button**
Press this button to check the channel being received, or if it has Stereo (ST), Second Audio (SAP), and Channel and Video I.D.

⑫ **PIX button**
Press this button repeatedly to directly access THEATER mode between Sport, TV, Movies and Music.

CUSTOMIZED PICTURE AND SOUND ADJUSTMENTS



Select VIDEO to adjust picture settings and improve picture quality.

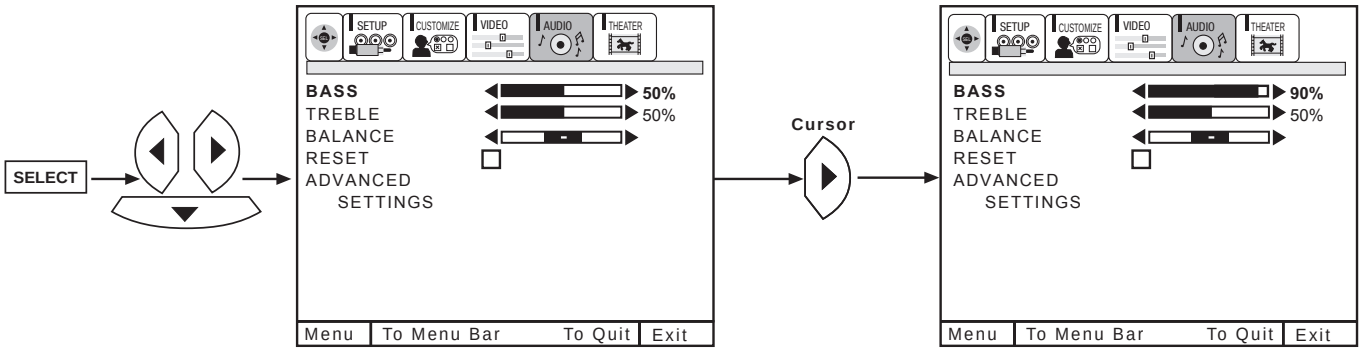


Use the CURSOR ▲ or ▼ buttons to highlight the function to be adjusted.
Press the CURSOR ◄ or ► buttons to adjust the function.
Press EXIT to quit menu.

NOTE:
- If CONTRAST is selected, you are adjusting CONTRAST. The additional menu items BRIGHTNESS, COLOR, TINT, and SHARPNESS can be selected and adjusted in the same manner.
- Contrast and Brightness adjustments will affect only the main picture. These adjustments will not affect the sub-picture.

CONTRAST	Use this function to change the contrast between black and white levels in the picture. This adjustment will only affect the picture when ADVANCED SETTINGS PERFECT PICTURE is OFF. (see page 48)
BRIGHTNESS	Use this function to adjust overall picture brightness.
COLOR	Use this function to adjust the level of color in the picture.
TINT	Use this function to adjust flesh tones so they appear natural. (It may be necessary to adjust TINT to obtain optimum picture quality when using the COMPONENT VIDEO: Y-P_BP_R INPUT 4 jacks).
SHARPNESS	Use this function to adjust the amount of fine detail in the picture.
RESET	When RESET is selected, press SELECT button to return video adjustments to factory preset conditions.

Select AUDIO SETTINGS to adjust the TV to your preference and to improve the sound quality.



Use CURSOR ▲ or ▼ to highlight the function to be adjusted.
Press CURSOR ◄ or ► to adjust the function.
Press EXIT to quit MENU.

NOTE: If BASS is selected you are adjusting BASS. The additional menu items TREBLE and BALANCE can be selected and adjusted in the same manner.

BASS	This function controls the low frequency audio to all speakers.
TREBLE	This function controls the high frequency audio to all speakers.
BALANCE	This function will control the left to right balance of the TV internal speakers and the AUDIO TO HI FI output.
RESET	When RESET is selected, press SELECT to return audio adjustments to factory preset conditions.

DIGITAL ARRAY

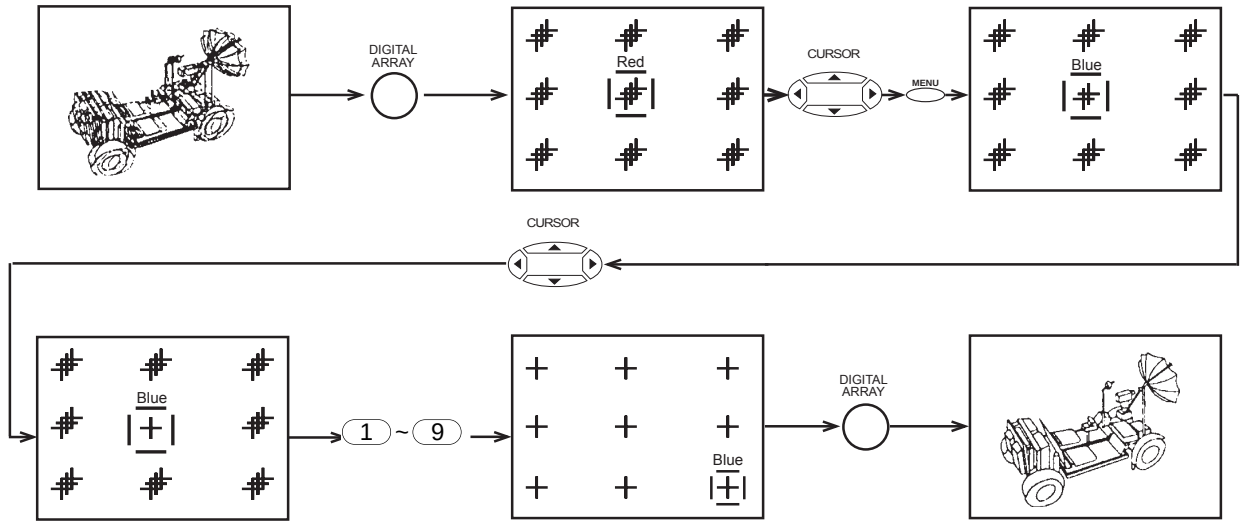
Your HITACHI Projection TV has three color projection tubes: one for red, one for green, one for blue. When mixed together in the proper proportion, the output of these three color tubes can produce any color. To produce these colors, however, the beams must be precisely aligned over each other so that the colors can be mixed. The process of aligning these picture beams is called “convergence”.

Over a period of time, the picture tubes can drift out of alignment due to normal bumps and vibrations or moving the TV. If you move your TV, or if, after a time, you notice color rings or halos around objects in the picture, you may want to converge (align) the colors.

Properly converged, the lines appear white, which is actually a combination of the outputs of the three color tubes. The output of the green tube is stationary. The outputs of the red and blue tubes can be adjusted. When properly aligned, the outputs of all three tubes should be directly over each other to produce the white lines.

To simplify convergence, HITACHI incorporates a feature to allow you to display a test pattern of horizontal and vertical lines at 9 different locations on the screen. Simply use the remote control to adjust the red and blue colors to match the green. When properly aligned, the outputs of all three tubes should be directly over each other to produce the white lines.

To enter this adjustment mode, you may also select DIGITAL ARRAY from the Set Up menu. However, this will display a message prompting you to press the front panel DIGITAL ARRAY button.



Use the number buttons to select which point to adjust: (1) - Upper Left, (2) - Upper Middle, (3) - Upper Right, 4 - Center Left, (5) - Center, (6) - Center Right, (7) - Bottom Left, (8) - Bottom Middle, (9) - Bottom Right.

Press the CURSOR buttons to move the displayed color up, down, left, or right.

Press MENU to change the color you want to adjust.

Press the front panel DIGITAL ARRAY button or the remote control MOVE button when adjustment is done. This will save your adjustment into memory.

NOTE: Only a momentary press of the DIGITAL ARRAY button is necessary to enter DIGITAL ARRAY convergence adjustment mode.

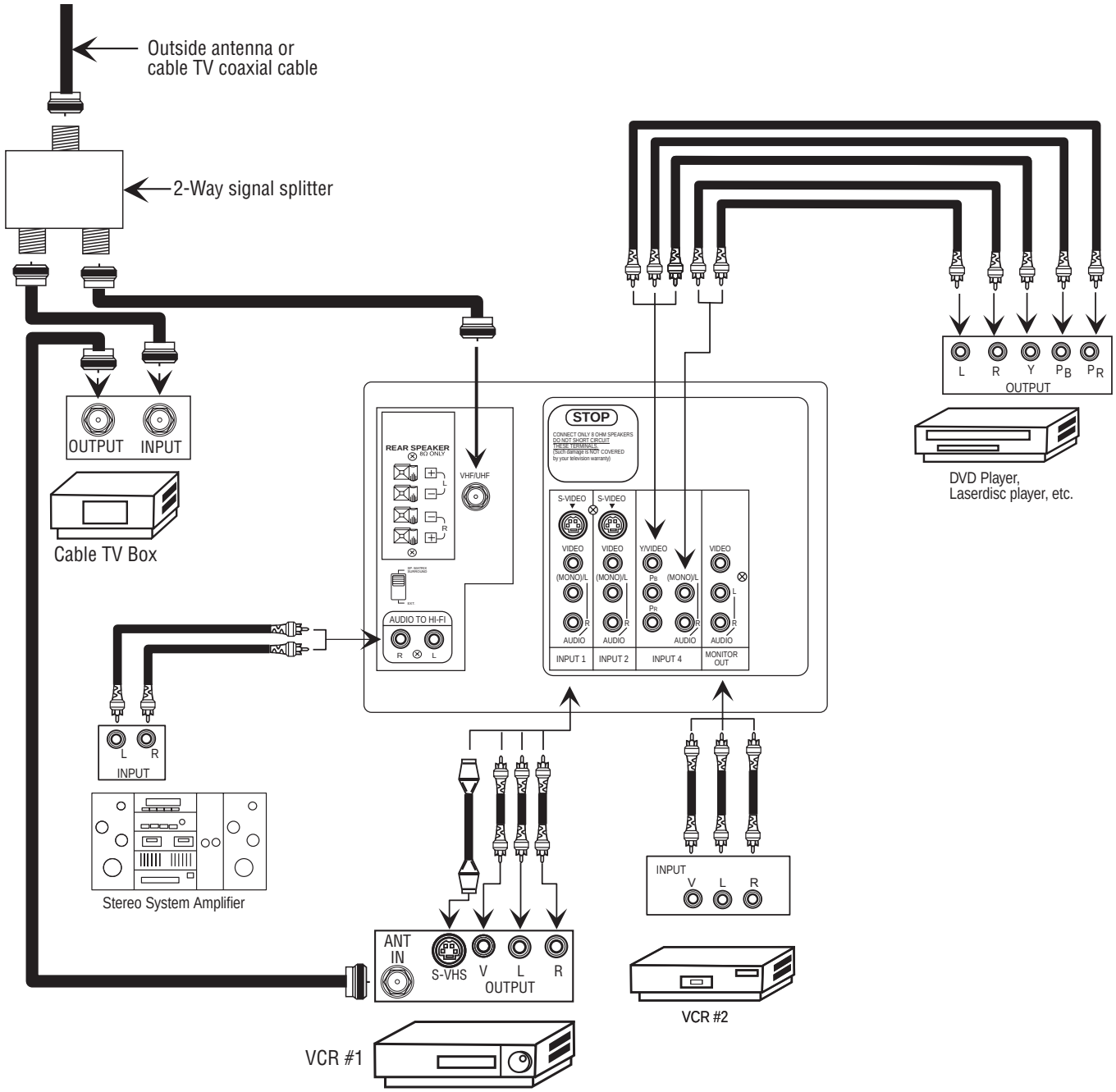
Do not press the DIGITAL ARRAY button for more than three seconds. This is only for extreme cases of misconvergence and requires assistance from service.

Four lines surrounding a crosshatch indicate the point being adjusted. The color of these surrounding lines indicates the color being adjusted.

To save your adjustment data into memory, press the front panel DIGITAL ARRAY button or the remote control MOVE Button. If you do NOT wish to save your adjustment data into memory, turn the TV OFF or press the remote control PIP button. When the TV is turned ON again, your old convergence data will be restored.

When adjusting convergence, always start at the center of the screen.

REAR PANEL CONNECTIONS



Typical full feature setup. Follow connections that pertain to your personal entertainment system.

SERVICE ADJUSTMENTS

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1. ASSEMBLED P.W.B. ADJUSTMENT

1.1 Memory Initialization

Adjustment Procedure

(1) Press INPUT key on Control Panel and then Power On to access adjustment mode.
(2) Receive signal on main picture.
(3) Check the OSD according to table below, using ▲,▼ buttons on Remote Control.
(4) Press EXIT key to exit I²C ADJUST mode.

NOTE: 1. If there is a different value than shown in the table above, for fixed data, adjust it using ◀ ▶ buttons (only in this case).
2. When exchanging microprocessor and TV is turned on for first time. It requires initialization of MEMORY INITIALIZE.

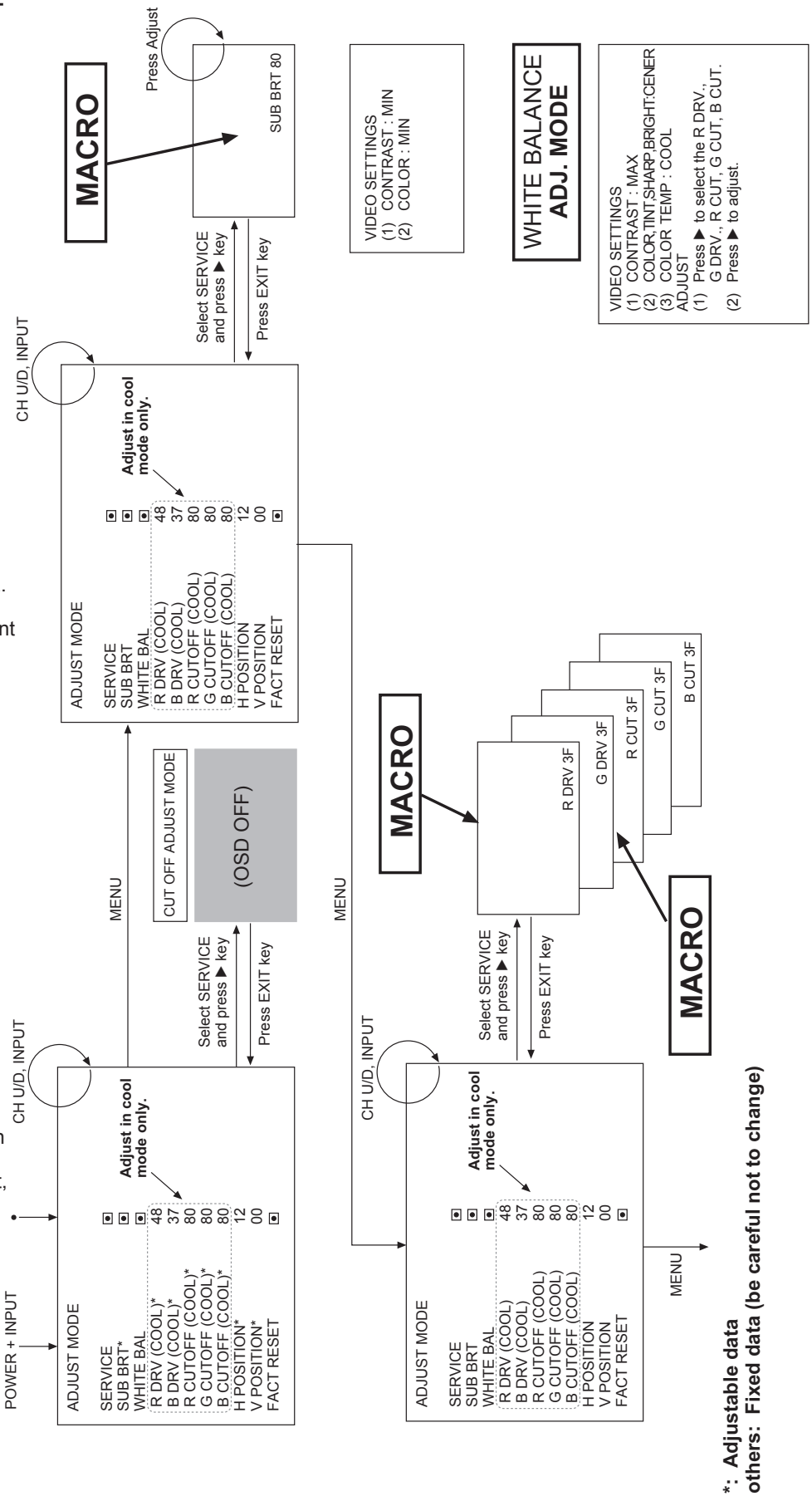
1.3 Sub-Picture (PIP) position adjustment

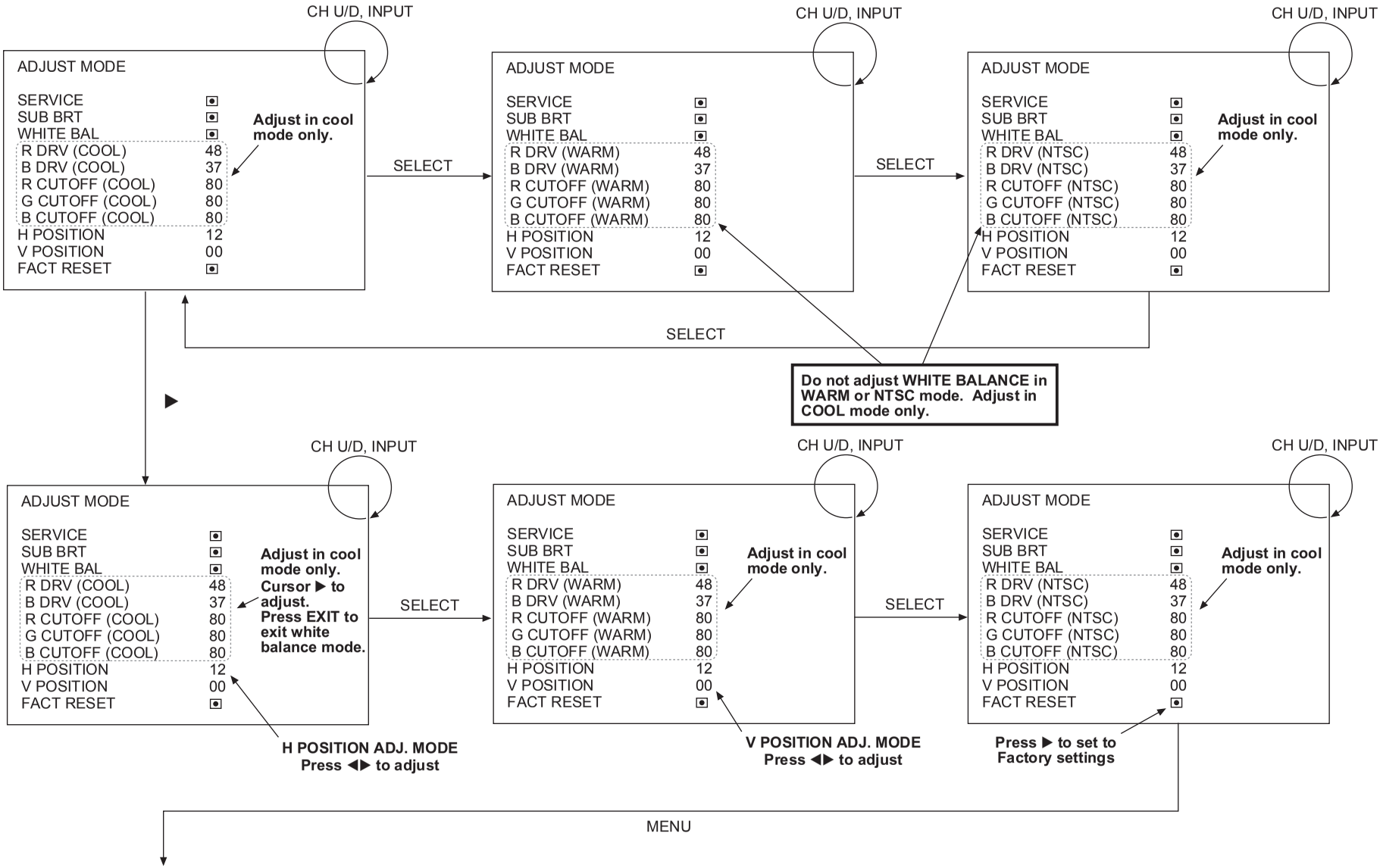
Adjustment Preparation

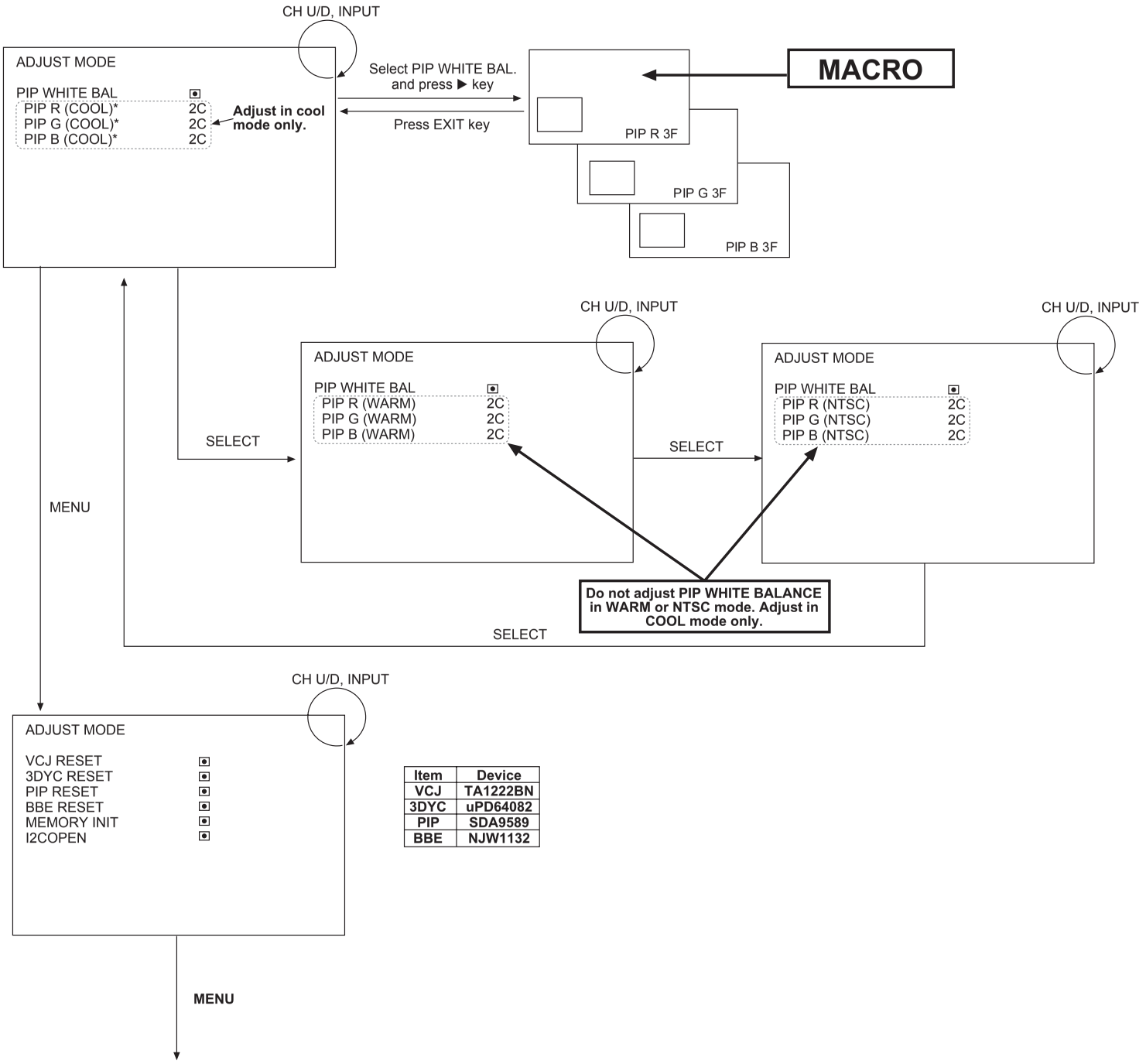
(1) Select signal on main picture.
(2) Video settings have to be at normal condition.

Adjustment Procedure

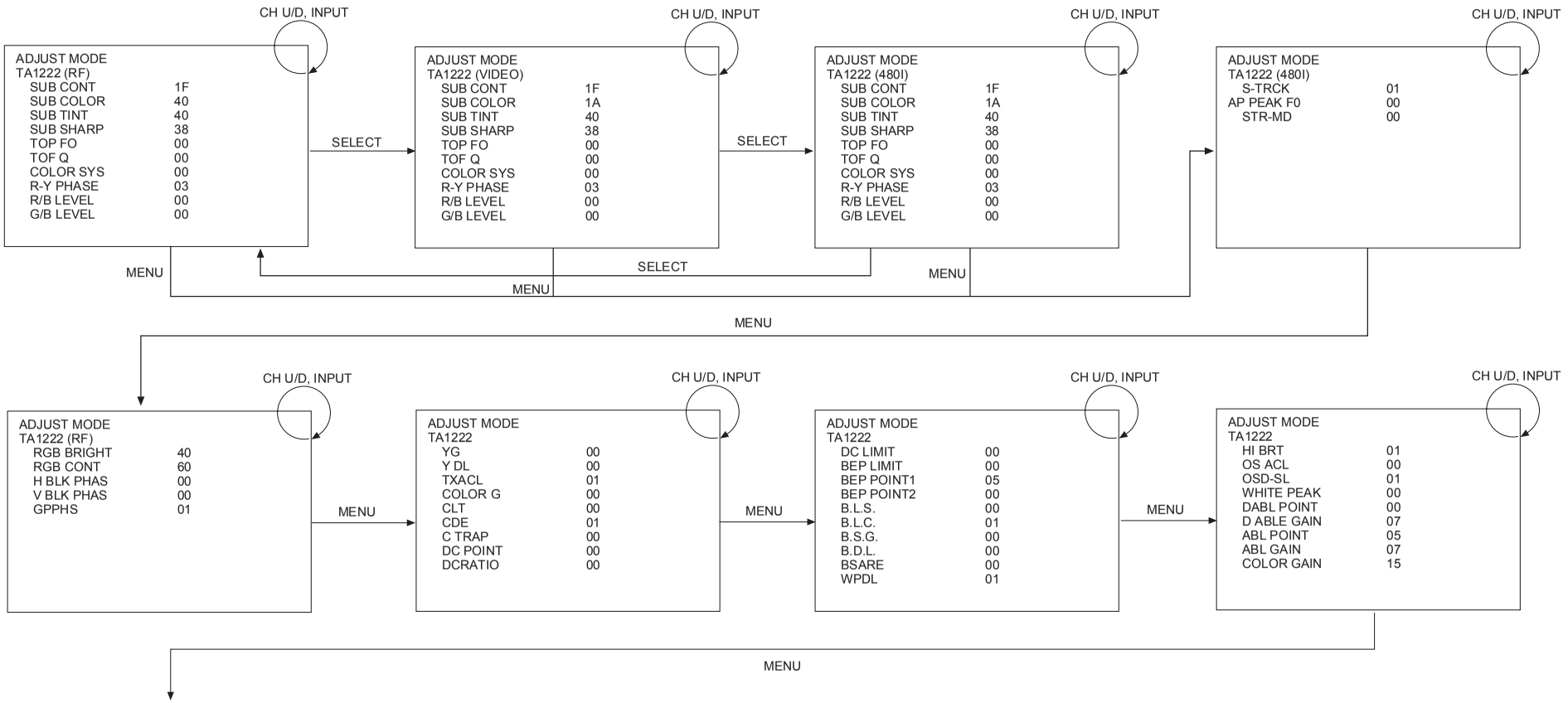
(1) Press the INPUT and POWER button on Control Panel at same time to acces VIDEO CHROMA ADJUST mode.
(2) Select HP POSI (Single) and VP POSI (Single) using ▼ ▲ buttons.
(3) Adjust the HP POSI (Single) (HORIZONTAL) and VP POSI (Single) (VERTICAL) position using ◀ ▶ buttons.
(4) Press EXIT button to exit I²C ADJUST mode.
(5) Select single PINP mode and move the sub picture, using the MOVE button. Distance between PINP and edge of screen should be equal when moved. If it is not, repeat (1)~(5).

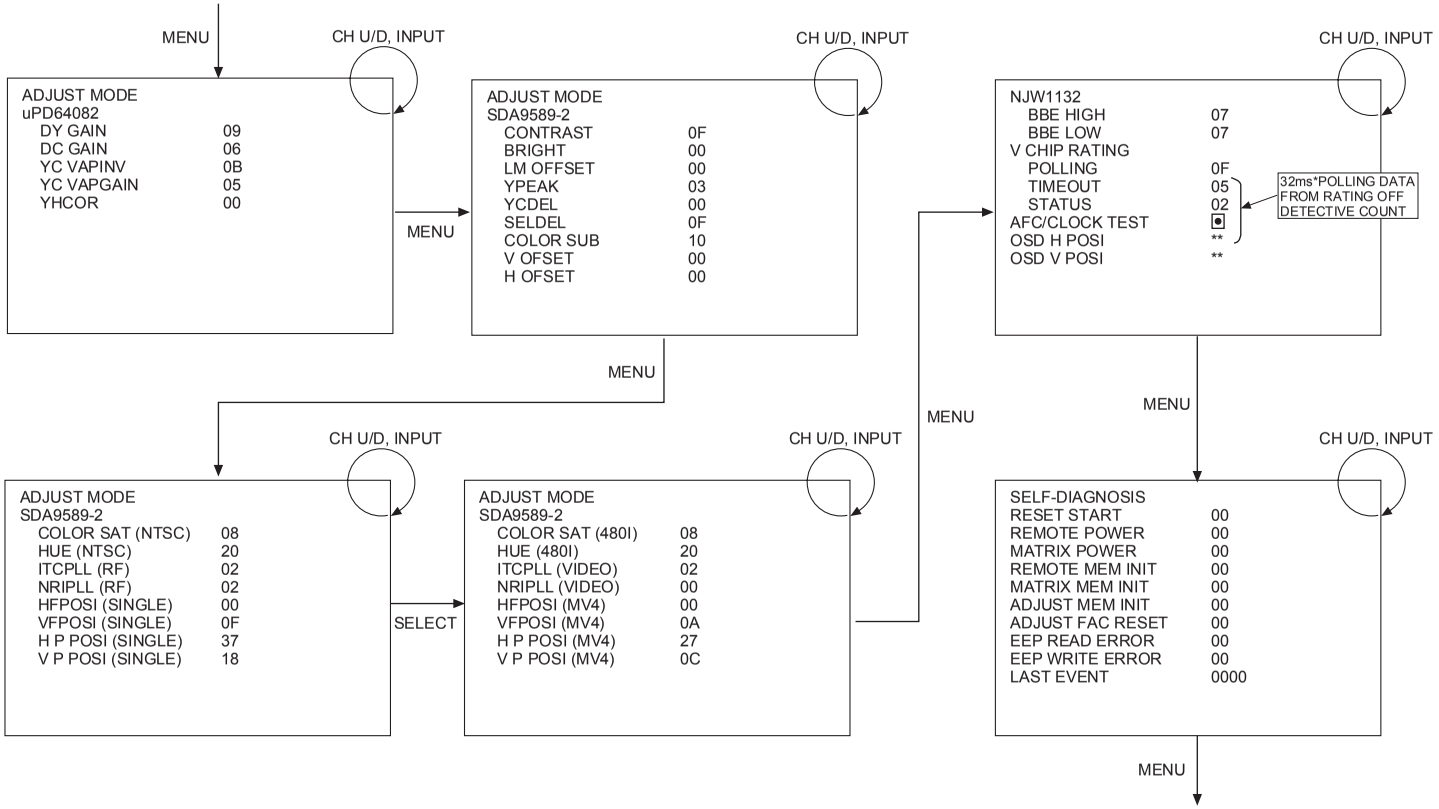



CH U/D, INPUT
ADJUST MODE
SERVICE
SUB BRT
WHITE BAL
R DRV (COOL) 48
B DRV (COOL) 37
R CUTOFF (COOL) 80
G CUTOFF (COOL) 80
B CUTOFF (COOL) 80
H POSITION 12
V POSITION 00
FACT RESET
Adjust in cool mode only.
SELECT
R DRV (WARM) 48
B DRV (WARM) 37
R CUTOFF (WARM) 80
G CUTOFF (WARM) 80
B CUTOFF (WARM) 80
R DRV (NTSC) 48
B DRV (NTSC) 37
R CUTOFF (NTSC) 80
G CUTOFF (NTSC) 80
B CUTOFF (NTSC) 80
Do not adjust WHITE BALANCE in WARM or NTSC mode. Adjust in COOL mode only.
Adjust in cool mode only. Cursor ▶ to adjust. Press EXIT to exit white balance mode.
H POSITION ADJ. MODE Press ◀▶ to adjust
V POSITION ADJ. MODE Press ◀▶ to adjust
Press ▶ to set to Factory settings
MENU



Item	Device
VCJ	TA1222BN
3DYC	uPD64082
PIP	SDA9589
BBE	NJW1132


CH U/D, INPUT
ADJUST MODE
TA1222 (RF)
SUB CONT 1F
SUB COLOR 40
SUB TINT 40
SUB SHARP 38
TOP FO 00
TOF Q 00
COLOR SYS 00
R-Y PHASE 03
R/B LEVEL 00
G/B LEVEL 00
SELECT
ADJUST MODE
TA1222 (VIDEO)
SUB CONT 1F
SUB COLOR 1A
SUB TINT 40
SUB SHARP 38
TOP FO 00
TOF Q 00
COLOR SYS 00
R-Y PHASE 03
R/B LEVEL 00
G/B LEVEL 00
SELECT
ADJUST MODE
TA1222 (480I)
SUB CONT 1F
SUB COLOR 1A
SUB TINT 40
SUB SHARP 38
TOP FO 00
TOF Q 00
COLOR SYS 00
R-Y PHASE 03
R/B LEVEL 00
G/B LEVEL 00
ADJUST MODE
TA1222 (480I)
S-TRCK 01
AP PEAK F0 00
STR-MD 00
MENU
SELECT
MENU
MENU
MENU
ADJUST MODE
TA1222 (RF)
RGB BRIGHT 40
RGB CONT 60
H BLK PHAS 00
V BLK PHAS 00
GPPHS 01
MENU
ADJUST MODE
TA1222
YG 00
Y DL 00
TXACL 01
COLOR G 00
CLT 00
CDE 01
C TRAP 00
DC POINT 00
DCRATIO 00
MENU
ADJUST MODE
TA1222
DC LIMIT 00
BEP LIMIT 00
BEP POINT1 05
BEP POINT2 00
B.L.S. 00
B.L.C. 01
B.S.G. 00
B.D.L. 00
BSARE 00
WPDL 01
MENU
ADJUST MODE
TA1222
HI BRT 01
OS ACL 00
OSD-SL 01
WHITE PEAK 00
DABL POINT 00
D ABLE GAIN 07
ABL POINT 05
ABL GAIN 07
COLOR GAIN 15
MENU


MENU
CH U/D, INPUT
ADJUST MODE
uPD64082
DY GAIN 09
DC GAIN 06
YC VAPINV 0B
YC VAPGAIN 05
YHCOR 00
MENU
CH U/D, INPUT
ADJUST MODE
SDA9589-2
CONTRAST 0F
BRIGHT 00
LM OFFSET 00
YPEAK 03
YCDEL 00
SELDEL 0F
COLOR SUB 10
V OFSET 00
H OFSET 00
MENU
CH U/D, INPUT
NJW1132
BBE HIGH 07
BBE LOW 07
V CHIP RATING
POLLING 0F
TIMEOUT 05
STATUS 02
AFC/CLOCK TEST
OSD H POSI **
OSD V POSI **
32ms*POLLING DATA FROM RATING OFF DETECTIVE COUNT
MENU
CH U/D, INPUT
SELF-DIAGNOSIS
RESET START 00
REMOTE POWER 00
MATRIX POWER 00
REMOTE MEM INIT 00
MATRIX MEM INIT 00
ADJUST MEM INIT 00
ADJUST FAC RESET 00
EEP READ ERROR 00
EEP WRITE ERROR 00
LAST EVENT 0000
MENU
MENU
CH U/D, INPUT
ADJUST MODE
SDA9589-2
COLOR SAT (NTSC) 08
HUE (NTSC) 20
ITCPLL (RF) 02
NRIPLL (RF) 02
HFPOSI (SINGLE) 00
VFPOSI (SINGLE) 0F
H P POSI (SINGLE) 37
V P POSI (SINGLE) 18
SELECT
CH U/D, INPUT
ADJUST MODE
SDA9589-2
COLOR SAT (480I) 08
HUE (480I) 20
ITCPLL (VIDEO) 02
NRIPLL (VIDEO) 00
HFPOSI (MV4) 00
VFPOSI (MV4) 0A
H P POSI (MV4) 27
V P POSI (MV4) 0C

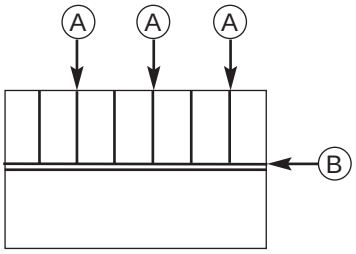
1.2 Comb filter operation check

Adjustment preparation

(1) Receive the color bar signal at the regular tuning point.
(2) Set the CONTRAST control to MAX and the other controls to center.
(3) Set the PERFECT PICTURE to OFF.

Adjustment procedure

(1) Check that between the color bars there are line dots every second color bar as shown in the drawing.



Check (A) and (B) line dots.

LINE	DOT
(A)	X
(B)	X

1.3 Scanning Area Check

Checking Condition

(1) Digital convergence adjustment should have been completed.
(2) Receive the circle pattern signal.
(3) Brightness/Contrast - Standard condition
Contrast: Max
Other Controls: Center position
(4) Check that the scanning area matches with the next drawing.

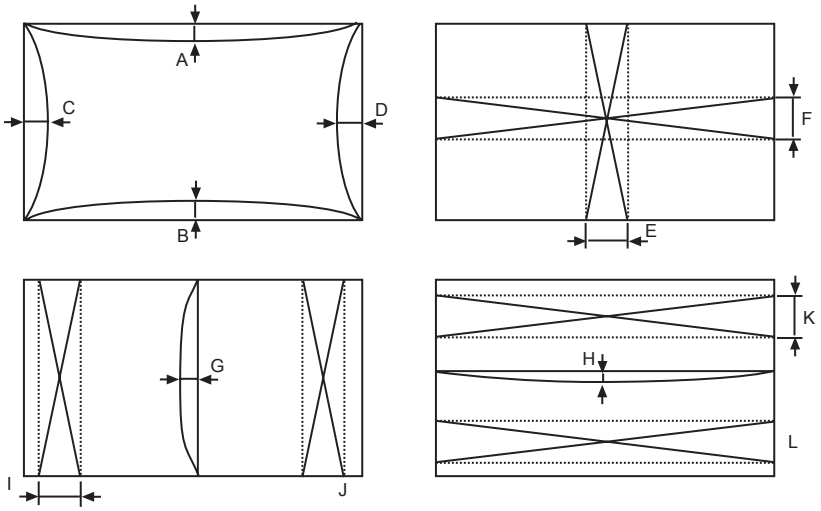
1.3 Raster Distortion Check

Checking Condition

(1) Digital convergence adjustment should have been completed.
(2) Receive the cross-hatch signal.
(3) Brightness/Contrast - Standard condition
Contrast: Max
Other Controls: Center position
(4) Check the raster distortion.
Specification: Value shown in the table below or less.
A~D
I~L - Measure the winding of the outside line.

(unit: mm)

Item		Symbol	43”	50”	60”
Top/Bottom pincushion distortion		A,B	±5	±6	±6
Right/Left pincushion distortion		C,D	±4	±4	±5
Center line tilt	Vertical line	E	5	6	6
	Horizontal line	F	5	6	6
Center line winding	Vertical line	G	±3	±3	±4
	Horizontal line	H	±3	±3	±4
Trapezoidal distortion	Vertical line	I,J	4	5	5
Skew distortion	Horizontal line	K,L	5	6	6



2. FINAL ASSEMBLY ADJUSTMENT

2.1 Cut Off Adjustment

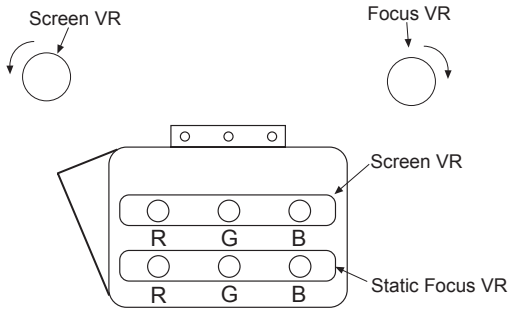
Adjustment preparation

(1) Set R and G drive VR's on CPT P.W.B. to center.
(2) Adjust screen VR's on Focus Pack fully counterclockwise.
(3) Adjust Focus VR's on Focus Pack fully clockwise.
(4) Set video conditions to factory preset.
(5) The vertical incident illumination on the screen should be 20 lux or less (room should be dark).

Adjustment procedure

(1) Press and hold INPUT key on control panel and then POWER ON to access I²C adjustment mode.
(2) Choose "SERVICE" item from I²C adjustment menu by pressing CURSOR ▶.
(3) Screen VR should be turned clockwise gradually and set so that retrace line begins to appear.
(4) Return to "NORMAL" mode by pressing the EXIT button.
(5) The blue line should be lighter thatn red and/or green.
(6) Adjust Focus VR's so that focus is even all around screen.

FOCUS PACK



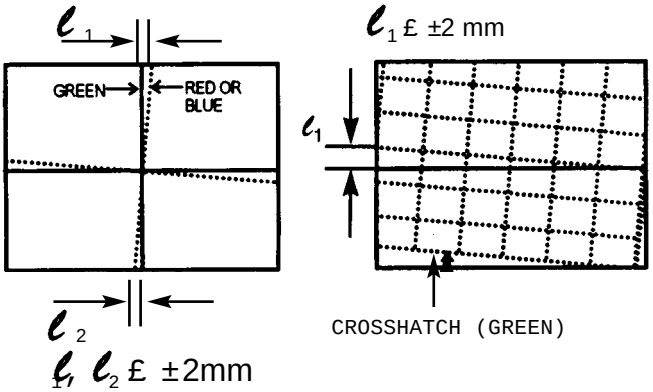
2.2 Raster Inclination adjustment (Deflection Yoke)

Adjustment preparation

(1) The set can face east or west.
(2) Input the single cross test signal.
(3) Set video conditions to factory reset.
(4) The lens focus adjustment should have been completed.
(5) The electric focus should have been coarse adjusted.
(6) The digital convergence RAM should be cleared (uncorrected state). With the TV set off, press and hold the service switch located on the Power/Deflection PWB and then press the power button.
(7) Start adjustment 20 minutes or more after TV is turned on

Adjustment procedure

(1) Apply covers to the R and B lenses and project only green light.
(2) Turn the G deflection yoke and adjust the vertical raster inclination.
(3) Then, remove the cover of R or B lens and project red or blue light and green light together on the screen.
(4) Turn the deflection yoke of R or B and set so that the inclination of R or B with respect to the green light is as shown below on the top and bottom sides.
(5) After raster inclination adjustment, fixing screw of DY should be screwed with 12±2kg-cm torque.



ℓ1, ℓ2 £ ±2mm

Notes: (1) If internal cross-hatch does not appear after clearing RAM data, press service switch again, on POWER/DEFLECTION PWB.
(2) To restore old RAM data, turn TV off and on.

2.3 Horizontal AFC Adjustment

Adjustment preparation

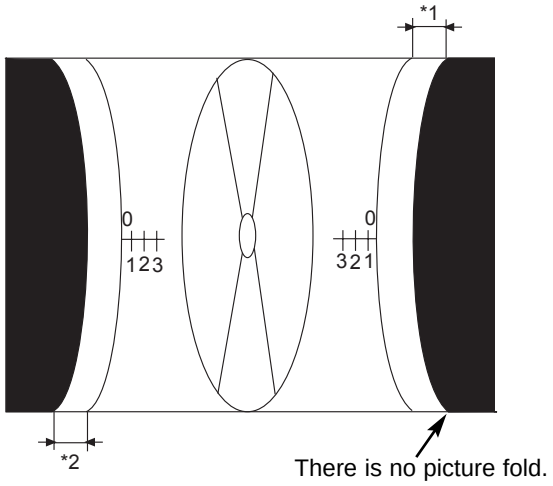
(1) Face the set East or West.
(2) Display the circle pattern signal.
(3) Contrast: Max, Brightness: Center.
(4) The electrical focus should have been coarse-adjusted.
(5) The convergence should be in un-corrected state.
Method of no correction state:
Turn power off and press POWER button and DIGITAL CONV. SERVICE ONLY button at the same time.
Then convergence is in correction.

> NOTE:
> DIGITAL CONV. SERVICE ONLY button: on the CONVER/FOCUS P.W.B.

Adjustment procedure

(1) Project only G on the screen using any one of the following procedures.
(a) Apply covers to the R and B lenses, or
(b) Short-circuit 2P sub mini connectors of the R and B CPT P.W.B.
(2) Set the VR of horizontal adjustment R603 counter clockwise, and set the H size minimum.
(3) Check as shown below.
The "0" marker of circle pattern is visible.

NOTE: In the case of inability to see "0" marker, turn the horizontal size adjustment VR at clockwise until the marker is visible.



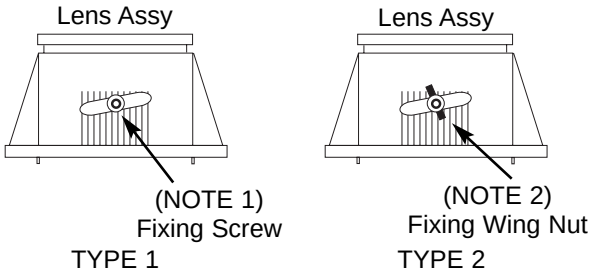
2.4 LENS FOCUS ADJUSTMENT

Adjustment preparation

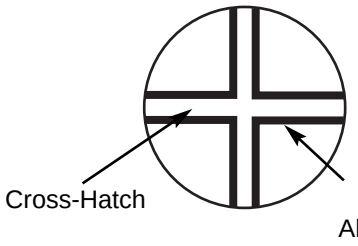
(1) The orientation of PTV set is arbitrary, west, east, north and south.
(2) Centering DY inclination should have been adjusted.
(3) FOCUS VR location adjustment should have been completed. (Red : 12 O'clock, Green : 1~2 O'clock).
(4) Receive the cross-hatch pattern signal.
(5) Refer to setup below.
CONTRAST : HALF of full scale.
BRIGHTNESS : minimum

Adjustment procedure

(1) Loosen the fixing screw or wing nut on the lens cylinder so that the lens cylinder can be turned. (Be careful not to loosen too much). After completing steps (4), (5), (6) below, tighten the fixing screws or wing nuts for each lens with a torque of 1.18N.m (12Kgf cm) ~ 1.67N.m (17Kgf cm).
(Be careful the lens cylinder does not turn after having tightened the screw or wing nuts. If it is tightened too much, lens may tilt or screw may break.)

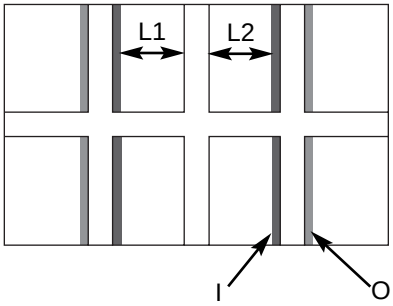


(2) Apply covers to each color of R, G and B lenses. And project a single color on the screen and adjust in sequence. (The adjustment order of R, G and B is only an example.)
(3) If the lens adjustment knob is turned clockwise viewed from the front, the color Aberration change as follows.



	Change of Color Aberration	
	Short focus	Long focus
RED LENS	Orange	Scarlet
GREEN LENS	Blue	Red
BLUE LENS	Purple	Green

(4) In case of G lens. Set to the point where the chromatic aberration switches from blue to red. If the chromatic aberration appearing all over the screen is not the same, observe the vertical bright line and adjust lens focus as specified in table below. When the red chromatic aberration appearing at both sides of the bright line is not equal, observe the side with larger chromatic aberration when adjusting.

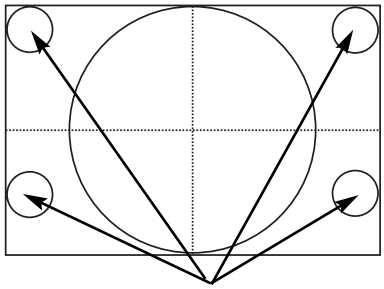


OPTICAL FOCUSING ADJUSTMENT GREEN

CHASSIS		43GX10B/50GX10B		50DX10B/60DX10B	
SCREEN SIZE		43"	50"	60"	50"
L1 and L2 (PITCHES from CENTER)		3.0	3.0	3.0	3.0
COLOR ABERRATION	L1&L2	*	*	*	*
	I	* 2mm MAX	* 3mm MAX	* 3mm MAX	* 3mm MAX
	O	* 2mm MAX	** 3mm MAX	** 3mm MAX	** 3mm MAX

(NOTE) * Slightly reddish or no color
** Slightly reddish or no color

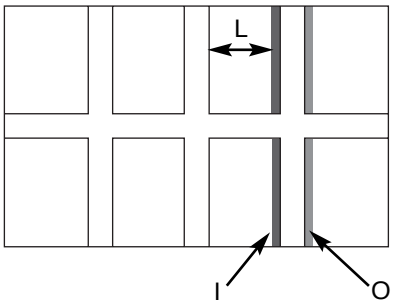
Change the signal to the circle pattern and fine adjust. Observe the corner part of the screen, especially observe number in the small circle when adjusting. If the focus performance at the screen center exceeds the lower limit, it is acceptable.



Small circle of circle pattern

NOTES: 1. Since the G light is very important for picture quality and performance, pay special attention in its adjustment.
2. Be careful not to touch the lens with your fingers when adjusting.

(5) In case of R lens. Set the position where the chromatic aberration changes from red to crimson. As shown below, observe the vertical bright line and adjust lens focus where the crimson or red chromatic aberration slightly appears inside and crimson or red outside (reference value : 1~3mm) at the point specified in table below. Change the signal and fine-adjust in the same way as the G lens.



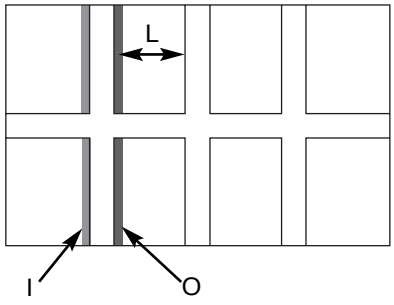
OPTICAL FOCUSING ADJUSTMENT RED

CHASSIS		43GX10B/50GX10B		50DX10B/60DX10B	
SCREEN SIZE		43"	50"	60"	50"
L1 and L2 (PITCHES from CENTER)		3.0	3.0	3.0	3.0
COLOR ABERRATION	L1&L2	*	*	**	**
	I	* 2mm MAX	* 3mm MAX	** 3mm MAX	** 3mm MAX
	O	** 2mm MAX	** 3mm MAX	* 3mm MAX	* 3mm MAX

(NOTE) * Slightly reddish or no color
** Slightly reddish or no color

NOTE: Setting the center between Red and crimson is optimum.

(6) In case of B lens. Set the position where the chromatic aberration changes from purple to green. As shown below, observe the vertical bright line and adjust lens focus where the purple or green chromatic aberration slightly appears inside and purple or green outside (reference value : 1~3mm) at the point specified in table below. Change the signal and fine-adjust in the same way as the G lens.



NOTE: Setting to the center between purple and crimson is optimum.

OPTICAL FOCUSING ADJUSTMENT BLUE

CHASSIS		43GX10B/50GX10B		50DX10B/60DX10B	
SCREEN SIZE		43"	50"	60"	50"
L1 and L2 (PITCHES from CENTER)		3.0	3.0	3.0	3.0
COLOR ABERRATION	L1&L2	*	*	**	**
	I	* 2mm MAX	* 3mm MAX	** 3mm MAX	** 2mm MAX
	O	** 2mm MAX	** 3mm MAX	* 2mm MAX	* 2mm MAX

(NOTE) * Slightly reddish or no color
** Slightly reddish or no color

Adjustment Procedure

(7) After all colors have been adjusted, display all colors with the cross-hatch pattern signal and compare the focus (optical focus) performance with the limit sample set.
(8) Then, select the circle pattern signal and compare the focus (optical focus) performance of each color and all colors together with the limit sample set.
(9) If the focus performance is worse than the limit sample set, re-adjust step (1) to (6).

2.5 STATIC FOCUS ADJUSTMENT

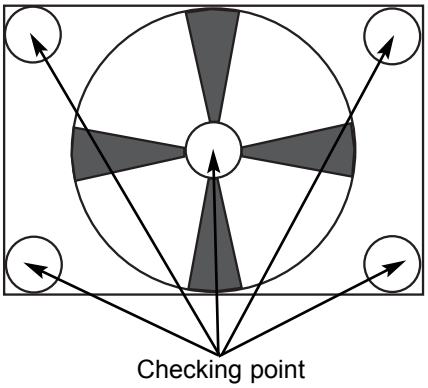
Adjustment preparation

(1) LENS FOCUS adjustment should be finished.
(2) Contrast : MAX
Brightness : Center.
(3) Receive the circle pattern signal.
(4) Apply covers to the lens of the colors you are not adjusting and project only one color on the screen.

Adjustment procedure

(1) Red and blue static focus adjustment. Adjust the static focus VR on Focus pack (UFPK) so that the center of circle pattern is the most clear. Check that the focus does not get conspicuously worse at the edges of the circle pattern signal or cross-hatch signal.
(2) Green static focus adjustment. Adjust the static focus VR on Focus pack (UFPK) (for green) so that the center of circle pattern is the most clear. Check that the focus does not get conspicuously worse at the checking point, the periphery of circle pattern cross-hatch signal.

NOTE: Checking point for the periphery of picture.



2.6 Raster position adjustment

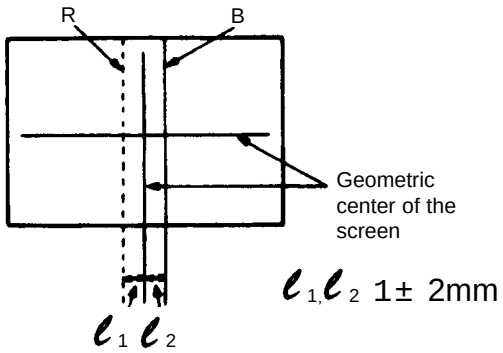
Adjustment preparation

(1) The set can face east or west.
(2) Input the single cross test signal.
(3) Set video conditions to factory reset.
(4) The lens focus adjustment should have been completed.
(5) The electric focus should have been coarse adjusted.
(6) The digital convergence RAM should be cleared (uncorrected state). With the TV set off, press and hold the service switch located on the CONVERGENCE PWB and then press the power button.
(7) Start adjustment 20 minutes or more after TV is turned on.

Adjustment procedure

(1) Turn the centering magnets for red, green, and blue to satisfy the condition below. The red and blue horizontal lines should match with green.

Size	ℓ_1 (RED)	ℓ_2 (BLUE)
60”	10mm	40mm
50”	10mm	30mm
43”	10mm	30mm



NOTES: (1) If internal cross-hatch does not appear after clearing RAM data, press service switch again.
(2) To restore old RAM data, turn TV off and on.

2.7 Vertical size adjustment (R630)

Adjustment preparation

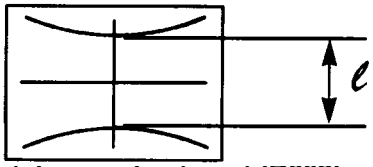
(1) The set can face east or west.
(2) Input the single cross test signal.
(3) Set video conditions to factory reset.
(4) The lens focus adjustment should have been completed.
(5) The electric focus should have been coarse adjusted.
(6) The digital convergence RAM should be cleared (uncorrected state) . With the TV set off, press and hold the service switch located on the CONVERGENCE PWB and then press the power button.
(7) Start adjustment 20 minutes or more after TV is turned on.

Adjustment procedure

(1) Turn only the green by applying covers to the red and blue lens or shorting the 2 pin TS connectors on the red and blue CPT P.W.B.
(2) Count the vertical lines of the DCU cross hatch. If the number of vertical lines is 9, go to step (3). If the number of vertical lines is 8, push “HELP” key and then “5” key on the R/C so the number of vertical lines becomes “9”.
(3) Turn vertical amplitude adjustment VR (R630) so that the distance between the top and bottom horizontal lines is equal to the size shown in the table.

Size	ℓ
60”	800 ± 5mm
50”	650 ± 5mm
43”	580 ± 5mm

Note: (1) If internal cross-hatch does not appear after clearing RAM data, press service switch again (on POWER/DEFLECTION PWB).
(2) To restore old RAM data, turn TV off and on.



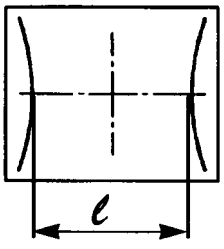
2.8 Horizontal size adjustment (R603)

Adjustment preparation

(1) The set can face east or west.
(2) Input the single cross test signal.
(3) Set video conditions to factory reset.
(4) The lens focus adjustment should have been completed.
(5) The electric focus should have been coarse adjusted.
(6) The digital convergence RAM should be cleared (uncorrected state). With the TV set off, press and hold the service switch located on the CONVERGENCE PWB and then press the power button.
(7) Start adjustment 20 minutes or more after TV is turned on.

Adjustment procedure

(1) Project only green, the same as Vertical size adjustment.
(2) Turn horizontal amplitude adjustment VR (R603) so distance between the left and right vertical lines is equal to the size shown in the table.



Size	ℓ
60”	1140 ± 5mm
50”	950 ± 5mm
43”	830 ± 5mm

Note: (1) If internal cross-hatch does not appear after clearing RAM data, press service switch again.
(2) To restore old RAM data, turn TV off and on.

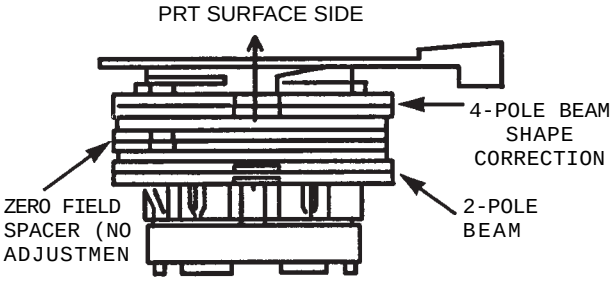
2.9 Beam shape adjustment

Adjustment preparation

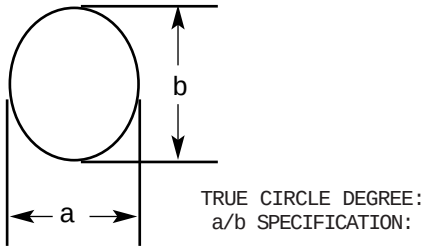
(1) The beam alignment should have been completed.
(2) The raster inclination, centering, horizontal/ vertical amplitude and optical focus adjustments should have been completed.
(3) Set video conditions to factory reset.
(4) Input the dot signal.

Adjustment procedure

(1) Green PRT beam shape adjustment. Short-circuit 2P sub-mini connectors on Red and Blue CPT P.W.B.s to project only the Green beam.
(2) Turn the green static focus fully clockwise. (Blooming.)
(3) Make the dot at the screen center a true circle using the 4-pole magnet as shown below.
(4) Also adjust the Red and Blue PRT beam shapes according to the steps (1) to (3).
(5) After the adjustment has been completed, return R, G and B static VRs to the just focus point.



TRUE CIRCLE SPECIFICATION



2.10 Static focus adjustment

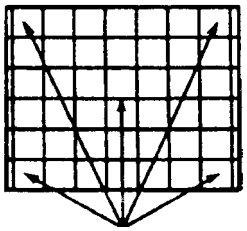
Adjustment preparation

(1) The raster inclination, centering, horizontal/ vertical amplitude and optical/electrical focus beam alignment should have been adjusted.
(2) The static convergence data should be cleared.
(3) Set video conditions to factory reset.
(4) Receive the cross-hatch pattern signal.
(5) Apply covers to the lenses of colors other than the color to be adjusted and project a single color.

Adjustment procedure

(1) Red (R), Green (G) and Blue (B) static focus adjustment. Vary the static focus VR (focus pack UFPK) and make the center of the cross-hatch pattern clearest.
(2) Observe the corners of the picture and check that the focus does not get conspicuously worse.

OBSERVING POINTS OF THE CORNER OF THE PICTURE



OBSERVING POINTS

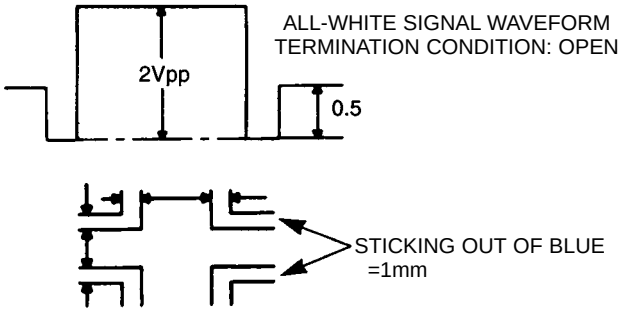
2.11 Blue defocus adjustment

Adjustment Preparation

(1) Optical and electrical focus adjustment should have been completed.
(2) The convergence adjustment should have been completed.
(3) Set Video conditions to factory reset.

Adjustment procedure

(1) Input an all-white signal shown below to VIDEO input.
(2) Short-circuit 2P sub-mini connectors on the red and green CPT P.W.Bs. to display only the blue beam.
(3) Turn the B Focus VR (Focus Pack) fully clockwise.
(4) Measure the brightness at the center of the screen and turn the B FOCUS VR (Focus Pack) counterclockwise to adjust the brightness of blue as shown in Table.
(5) After the adjustment is completed, if blue exceeds the specification, turn and adjust focus so that the sticking out part of blue satisfies the specification.



Condition: User controls are set to the initial set positions (for shipment) Measuring point Screen center.

Cautions: Correct the brightness gauge and amplitude of the all-white signal periodically. The aperture angle of the brightness gauge is 1°.

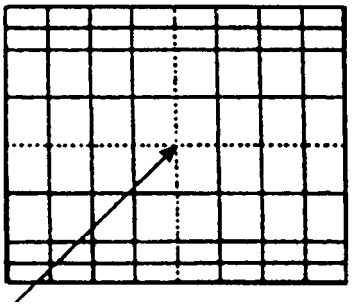
Use a cross-hatch pattern to check.

2.12 Digital convergence adjustment

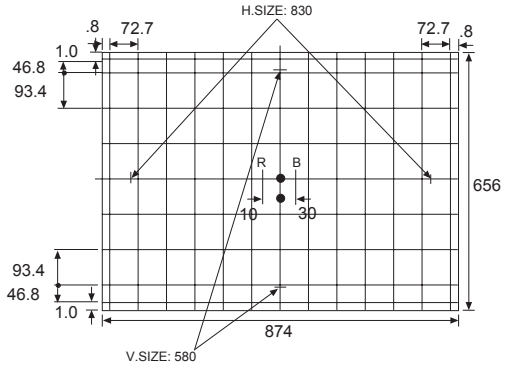
Adjustment preparation

(1) Receive an RF or video signal.
(2) Set controls to factory preset.
(3) Install jig screen on the set.
(4) Note the center of the video pattern displayed. This is necessary to match dotted lines (adjustment point viewed) and actual point that is adjusted and displayed by the video signal.

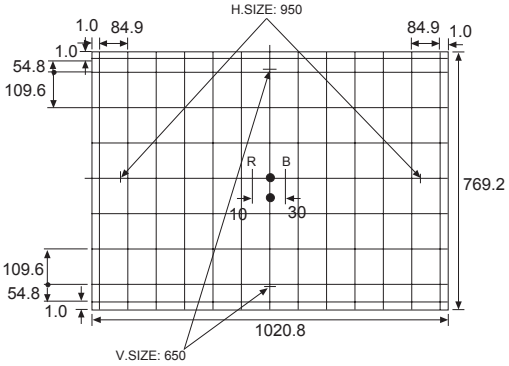
(5) Press the service only switch (on CONVERGENCE PWB). The pattern displayed is now the digital convergence mode.
(6) When performing a complete digital convergence adjustment CLEAR DATA in RAM. See 2.6. (1) - (7).



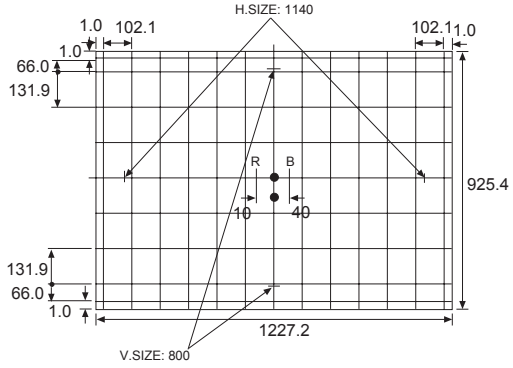
JIG SCREEN SPECIFICATION 43”



JIG SCREEN SPECIFICATION 50”



JIG SCREEN SPECIFICATION 60”



Note: If only minor adjustments to convergence are needed, the jig screen is not necessary. Use digital data stored in memory and one color as a reference (red, green, or blue). DO NOT CLEAR DATA and WRITE to ROM memory.

2.12.1 Phase adjustment (service mode)

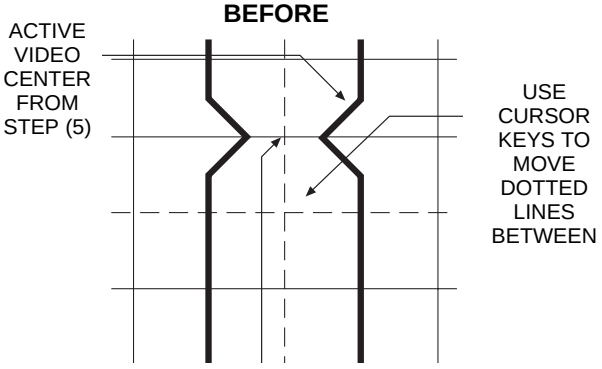
Adjustment preparation

(1) PHASE adjustment - This is to match the digital convergence cursor position to the video image displayed, and to match the digital convergence cursor position (dotted lines) to digital convergence data position (bent lines).

Adjustment procedure

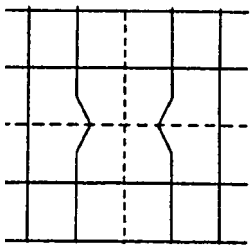
(1) Press the HELP button on the remote to select phase adjustment. (Only Green displayed).
(2) Identify the bent lines and use the cursor buttons to move the dotted lines in between as shown.
(3) Press HELP to exit PHASE mode.
(4) Press EXIT 5 times to display external signal.
(5) Identify center of active video, then press EXIT 5 times to return to internal cross-hatch.
(6) Press HELP (phase adj.), and use 2, 4, 5 and 6 to position internal cross-hatch center on active video center identified in step (5).
(7) Press HELP to exit PHASE mode.

BEFORE



THEN USE NUMBER KEYS TO MATCH INTERNAL CROSSHATCH CENTER TO ACTIVE VIDEO CENTER

AFTER



2.12.2 Raster position adjustment

Adjustment preparation

(1) Position adjustment - This will move an entire color. Use this adjustment to match colors at the center of the screen. (Active video center from external signal and physical screen center should now match from phase adj. 2.15.1.).
(2) Use the buttons below to switch color to adjust.
"STATUS" - Green
"0" - Red
"INPUT" - Blue

Adjustment procedure

(1) Press the FREEZE button. Extra horizontal lines appear to confirm raster position mode.
(2) Use the cursor buttons to adjust position.
(3) Press FREEZE again to exit raster position mode.

Notes: (1) Other functions cannot be accessed when in raster position adjustment mode. Press FREEZE and confirm extra horizontal lines disappear to exit raster position mode.
(2) Press MENU to switch between all colors displayed or adjustment color and Green only.

2.12.3 Convergence point adjustment

Adjustment preparation

(1) Select color to adjust.
"STATUS" - Green
"0" - Red
"INPUT" - Blue
(2) Use 4, 6, 2, and 5 to move the cursor position (dotted lines).
(3) Use cursor buttons to move the convergence point.
(4) Three adjustment modes are available:
1. (3x3) Press "STATUS" 5 times
2. (7x5) Press "0" 5 times
3. (13x9) Press "INPUT" 5 times

NOTE: 3 x 3 mode can only be accessed at start of adjustment from clear data in ram adj. mode.

For touch-up, only the (13x9) mode is necessary. This will adjust every cross-hatch intersection point on the screen.

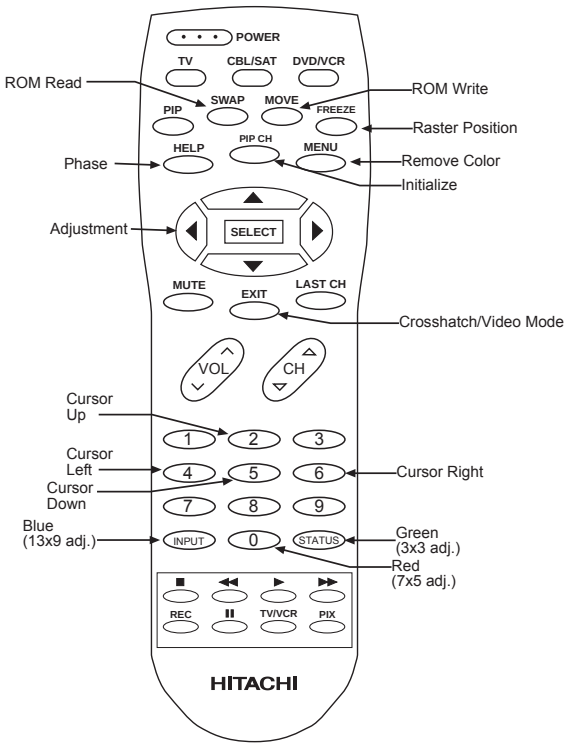
For complete adjustment, start with (3x3) mode. This will adjust center point and eight edge points only, but will greatly reduce adjustment time. Then use (7x5) mode, and finally (13x9) mode to finish convergence.

Adjustment procedure

(1) Start adjustment at the center of the screen.
(2) Continue adjustment at next closest position.
(3) Adjust center area first, ending with edge sections.
(4) When convergence is acceptable, press MOVE to write data to ROM memory. ROM WRITE? is displayed to alarm system that ROM will be overwritten with new data. Press the MOVE button again to write displayed data to ROM.
(5) DATA WRITE TO ROM will take approximately 20 seconds and no picture will be displayed.
(6) Green dots will be displayed when operation is complete.
(7) Press MUTE to return to convergence pattern, then confirm again convergence is acceptable.

Notes: (1) Display only green for easier adjustment and match to jig screen. Press "MENU", THEN PRESS "STATUS".
(2) Write data to ROM after green adjustment. Once green has been confirmed to match jig screen, the jig screen can be removed. Do not readjust the green color after jig screen has been removed. This is now your reference color.
(3) Display green and red only and match red to green.
(4) Display all colors and match blue to green and red. Touch-up red color if necessary.
(5) Existing DATA in ROM can be read by pressing the SWAP button 2 times. This data can be used after replacing a component (CRT, DY, etc.) Where complete convergence adjustment is not necessary be careful not to overwrite this data.
DO NOT save uncorrected RAM data into ROM or a complete convergence adjustment will be necessary.

2.12.4 Digital Convergence Remote Control



2.13. SUB BRIGHTNESS ADJUSTMENT

54.1 SUB BRIGHTNESS ADJUSTMENT

Adjustment preparation

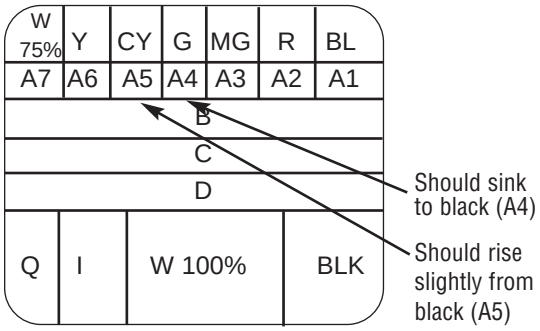
(1) Start adjustment 20 minutes or more after the power is turned ON.
(2) Receive the color bar signal.
(3) The vertical incident illumintation on the screen should be 20 lux or less.

Adjustment procedure

(1) Go to “Sub Brightness” adj. mode by pressing INPUT and POWER buttons at the same time.
(2) Adjust Sub Brightness datat to meet spec. below.

Remarks:

Directly observe the CPT screen by eye, without using a mirror.



NOTE:

When selecting SUB-BRIGHTNESS mode, the ucon sets the CONTRAST and COLOR to Min. automatically, but make sure that the other conditiions are center.

54.2 CHECK CUT OFF ADJUSTMENT

Adjustment preparation

(1) Pre heat-run should be finished.

Adjustment procedure

(1) Go to “SERVICE” mode by pressing INPUT and POWER buttons at the same time.
(2) Check that the blue line is lighter than other lines.
(3) If other lines are lighter than blue line, re-adjust only Blue Cut OFF in order to be lighter than other lines.

2.14. WHITE BALANCE ADJUSTMENT

(1) High brightness white balance
(2) Low brightness white balance

Low brightness white balance:

Red : Service mode (R cut OFF)
Green : Service mode (G cut OFF)
Blue : Service mode (B cut OFF) (fix data @ 80)

High brightness white balance:

Red : Service mode (R DRV)
Blue : Service mode (B DRV)

Adjustment preparation

(1) Should be started adjustment after 20 minutes or more form the power turn ON.
(2) Should be finished CUT OFF ADJ>
(3) VIDEO control: Contrast is MAX., Others are center.
(4) Color temp. : COOL.
(5) Signal:
High Light white balance ADJ.
White raster 0.715Vpp (w/o sync., termination incidence : 75ohm.)
Low light white balance ADJ.
Luminance should be 20cd/m^2.
(6) Should be finished BLUE defocus ADJ.
(7) The vertical incident illumination on the screen should be 20 Lux. or less.

Adjustment procedure

(A) Hight Light W/B adjustment:
  (1) Receive signal for High Light white balance ADJ.
  (2) Adjust white balance to 10800K 07 MPCE (X,Y) = (0.278, 0.280) by using JIG R/C of (R DRV) and (B DRV0 Screen Center.
(B) Low Light W/B adjustment
  (1) Receive signal for Low Light white balance ADJ.
  (2) Adjust white balance to 10800K 07 MPCD (X, Y) = (0.278, 0.280) by using R/C of (R CUT OFF) and B CUT OFF should be fixed, (G CUT OFF).

Repeat A & B two or three times.

* If low light adj. spec. can not be followed, apply previous adj. spec.

2.15. SUB PICTURE ADJUSTMENT

2.15.1 SUB PICTURE BLACK LEVEL CHECK

Adjustment preparation

(1) Start adjustment about 20 minutes after the power switch is turned ON.
(2) After displaying the white signal with main picture, display the sub picture and receive the clor bar signal with it.
CONDITION: CONT. = MAX.
OTHERS = CENTER

Adjustment procedure

(1) Check the sub picture setting the part of A1 of the color bar pattern to black.
(check specification ± 0.5 steps.)

2.15.2 SUB PICTURE WHITE BALANCE ADJ.

Adjustment preparation

(1) Turn off the sub picture by pressing (PinP) key of remote control. (keeping the white signal with main picture.)
(2) Display and match the sub picture details with the main picture details by pressing (FRZ) key of remote controller.
(3) Select “Single” freeze mode.
(4) Condition should be set as follows:
CONT. = MAX.
OTHERS = CENTER

(5) Check the EXT RGB CONT : 60 of V/C I²C ADJ. by using JIG R/C.

(6) White signal spec. amplitude 2.0Vpp (Sync. 0.6Vpp)

Adjustment procedure

(1) Observe P802 on the CPT P.W.B. and change the PKL B of service mode by using jig R/C and adjust so that the amplitude of the sub picture is the same as that of the main picture.

(2) Similarly, observe P832 on the CPT P.W.B. and change the PKL G of service mode by using jig R/C and adjust so that the amplitude of the sub picture is the same as that of the main picture.

(3) Similarly, observe P862 on the CPT P.W.B. and change the PKL R of service mode by using jig R/C and adjust so that amplitude of the sub picture is the same as that of the main picture.

(4) Check the matching the white balance of the sub picture with that of the main picture.

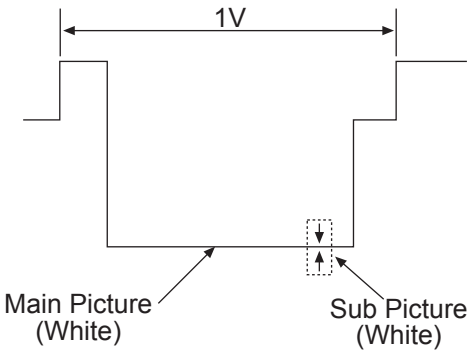
If it does not, return to step (1).

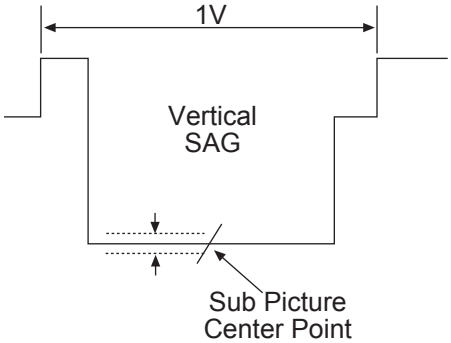
* Adjustment specification : ±1V

* Quality control specification: ±3V

* Wave form of P802, P832, P862 = Cathode.

(Sub picture levvel compared with main picture level.)





* Perform this adjustment after the white balance and sub-brightness adjustments of the main picture are completed.

* White balance 10800˚K -7 MPCD (color coordinates : x=0.278, y=0.280)

* Refer to the sub-brightness adjustment for details of the gray scale of color bar signal.

2.15.3 SUB PICTURE POSITION ADJUSTMENT

Adjustment preparation

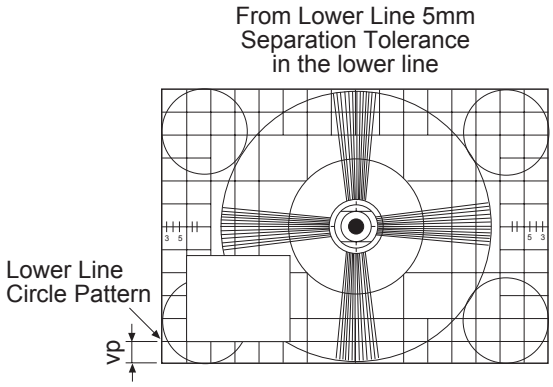
(1) Select the Circle Pattern signal on main picture.

(2) Video settings has to be at normal condition

Adjustment procedure

(1) Go to “PinP POSITION ADJ.” mode.

(2) Adjust vertical position and Horizontal position.

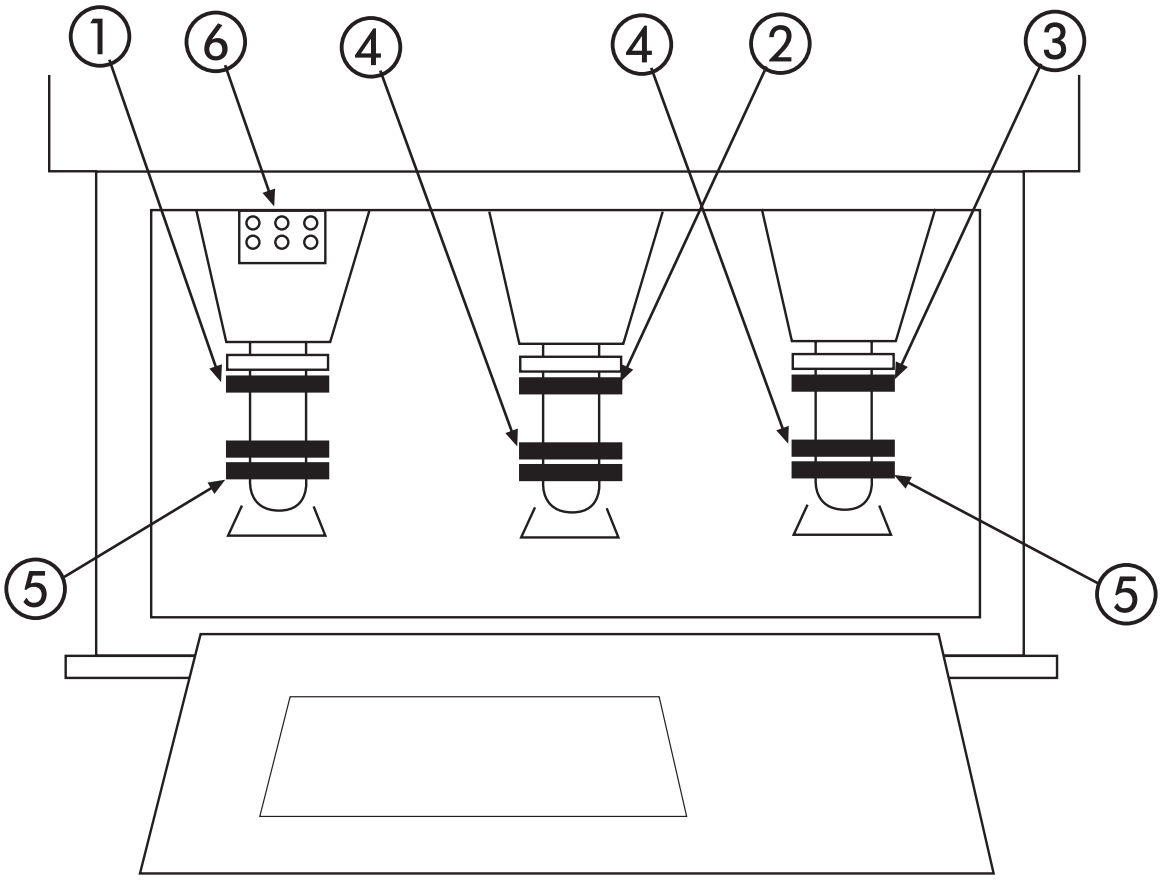


NOTE: The micro-controller has an original data for the PIP position for HP and VP, if the position needs to be re-adjusted then do the procedure for this adjustment, in case that the position of PIP is between the spec. 5.5±0.5 and close to the lower line of the circle pattern no need to adjust only checking.

3.0 Adjustment Locations

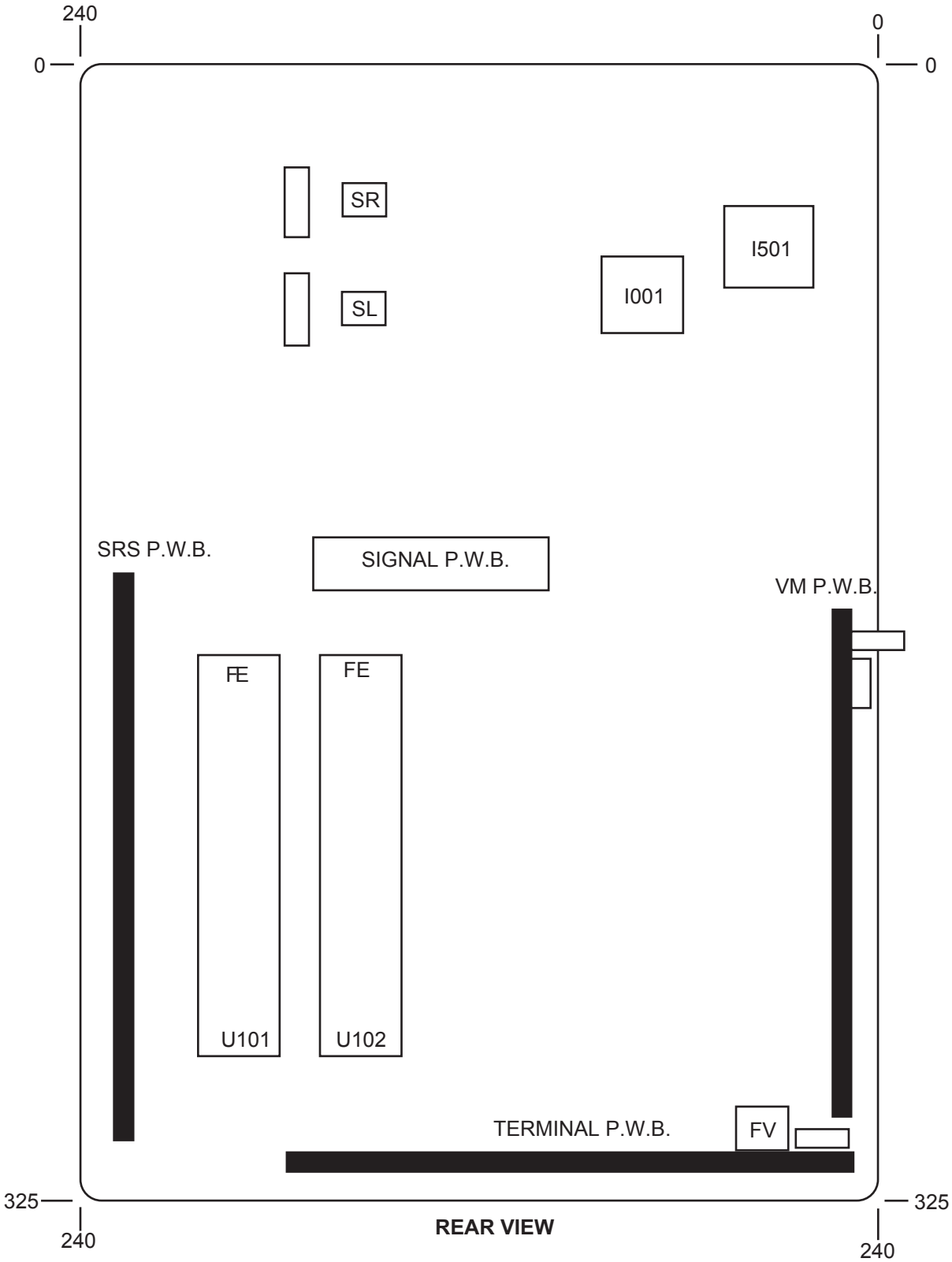
3.1 CRT (R) (G) (B) Cabinet Locations

FRONT

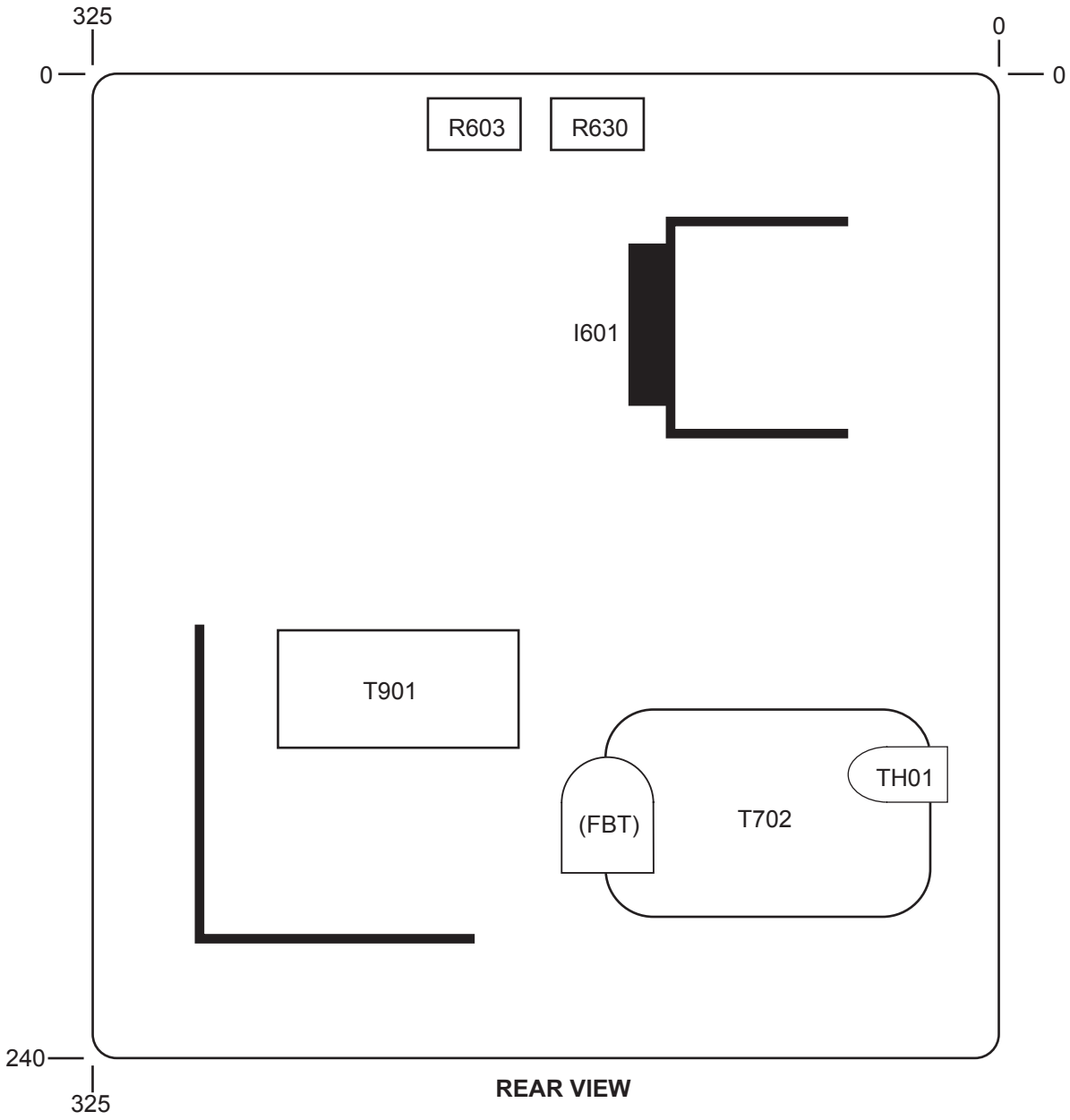


1. Centering Magnet for RED PRT.
2. Centering Magnet for GREEN PRT.
3. Centering Magnet for BLUE PRT.
4. 4-Pole Magnet for BEAM FORM ADJSUTMENT
5. BEAM ALIGNMENT Magnet.
6. FOCUS PACK.

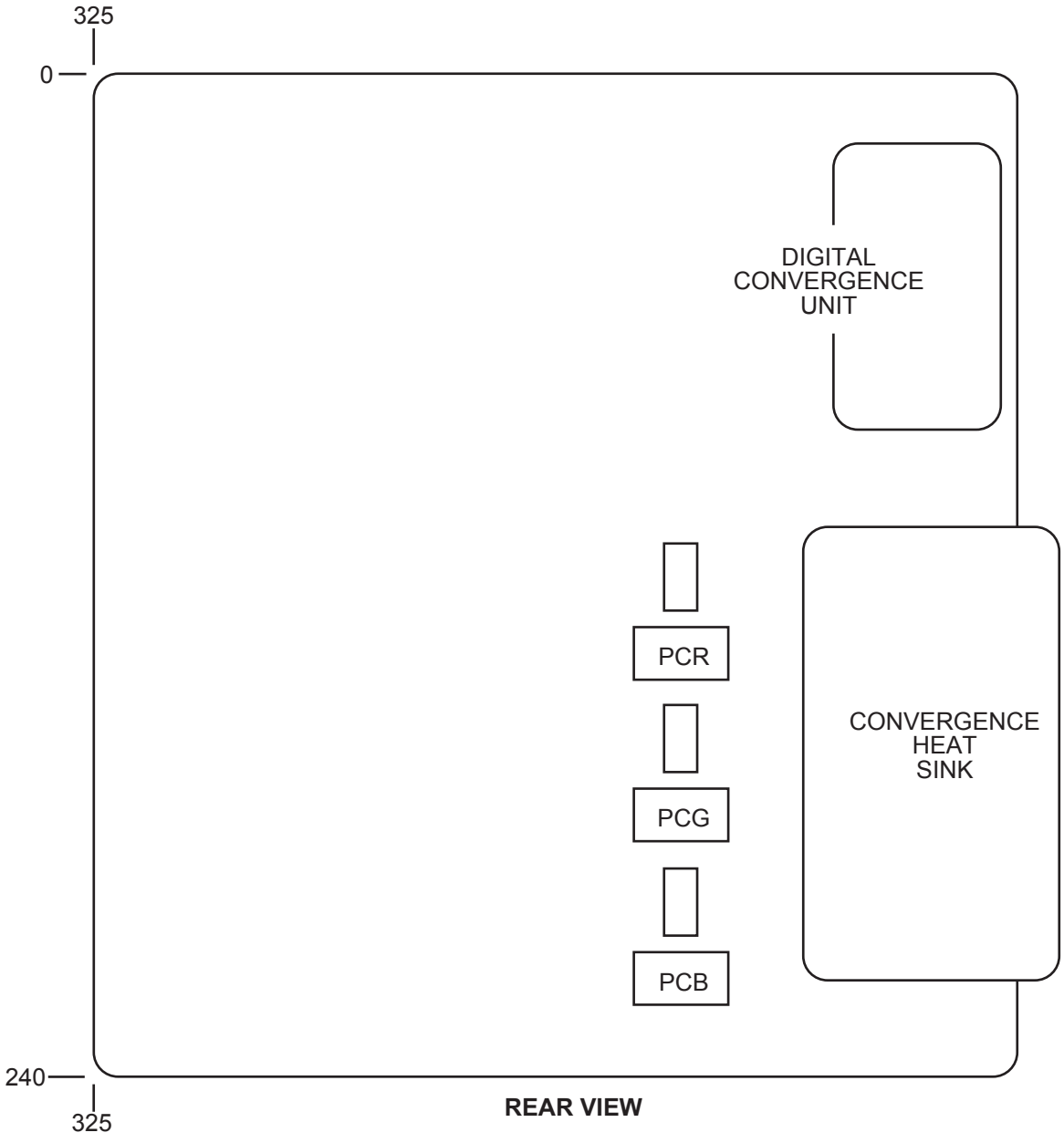
3.2 Main Chassis (Signal P.W.B.)



3.3 Main Chassis (Power/Deflection P.W.B.)

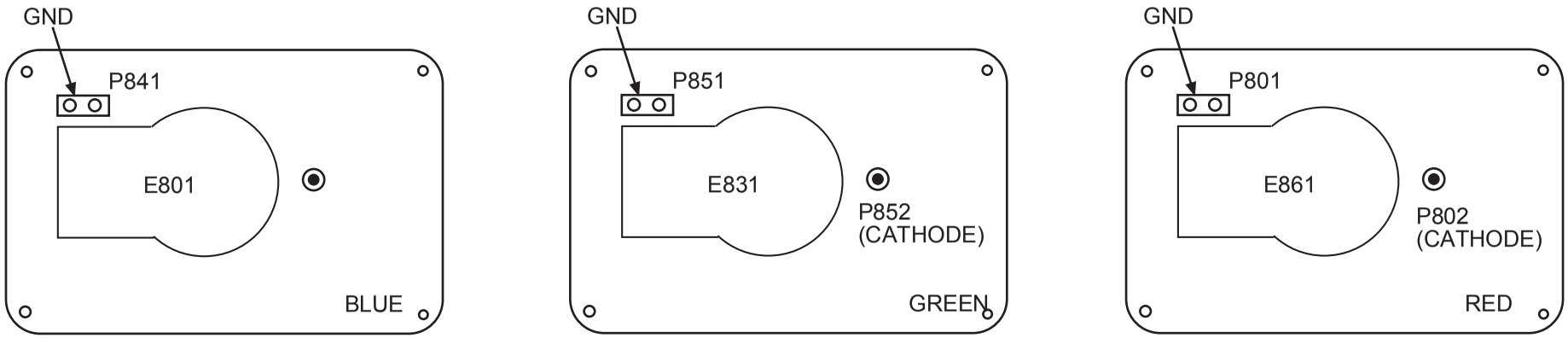


REAR VIEW

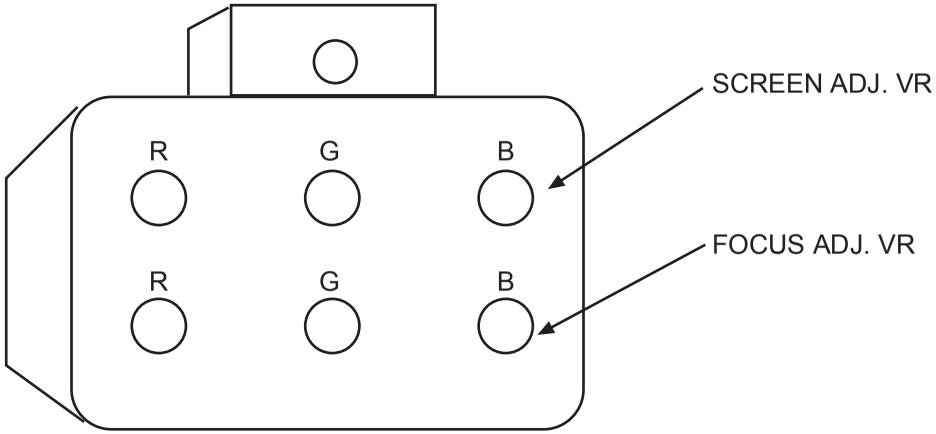

325
0
DIGITAL
CONVERGENCE
UNIT
PCR
PCG
PCB
CONVERGENCE
HEAT
SINK
240
325

REAR VIEW

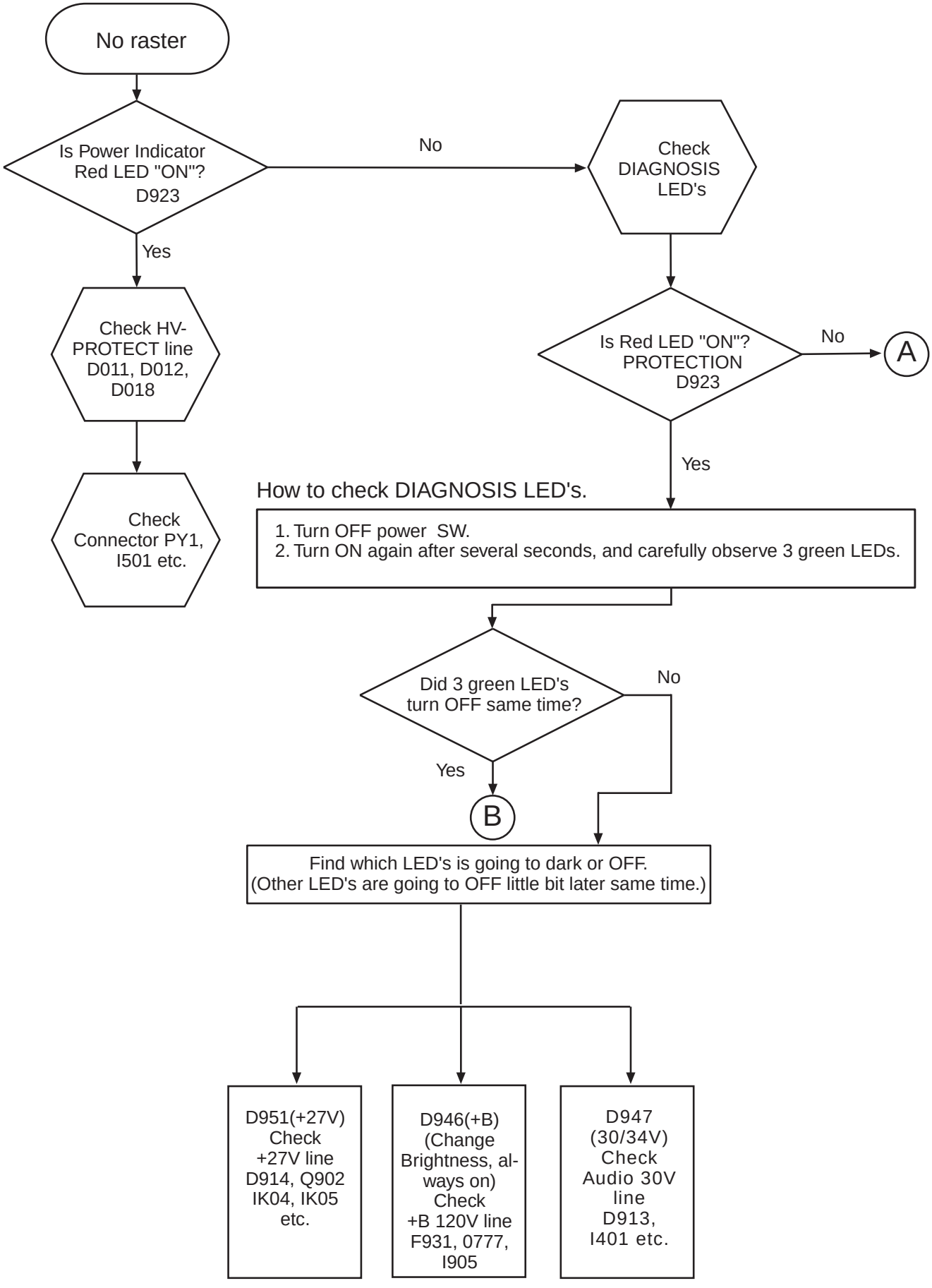
CPT P.W.B.

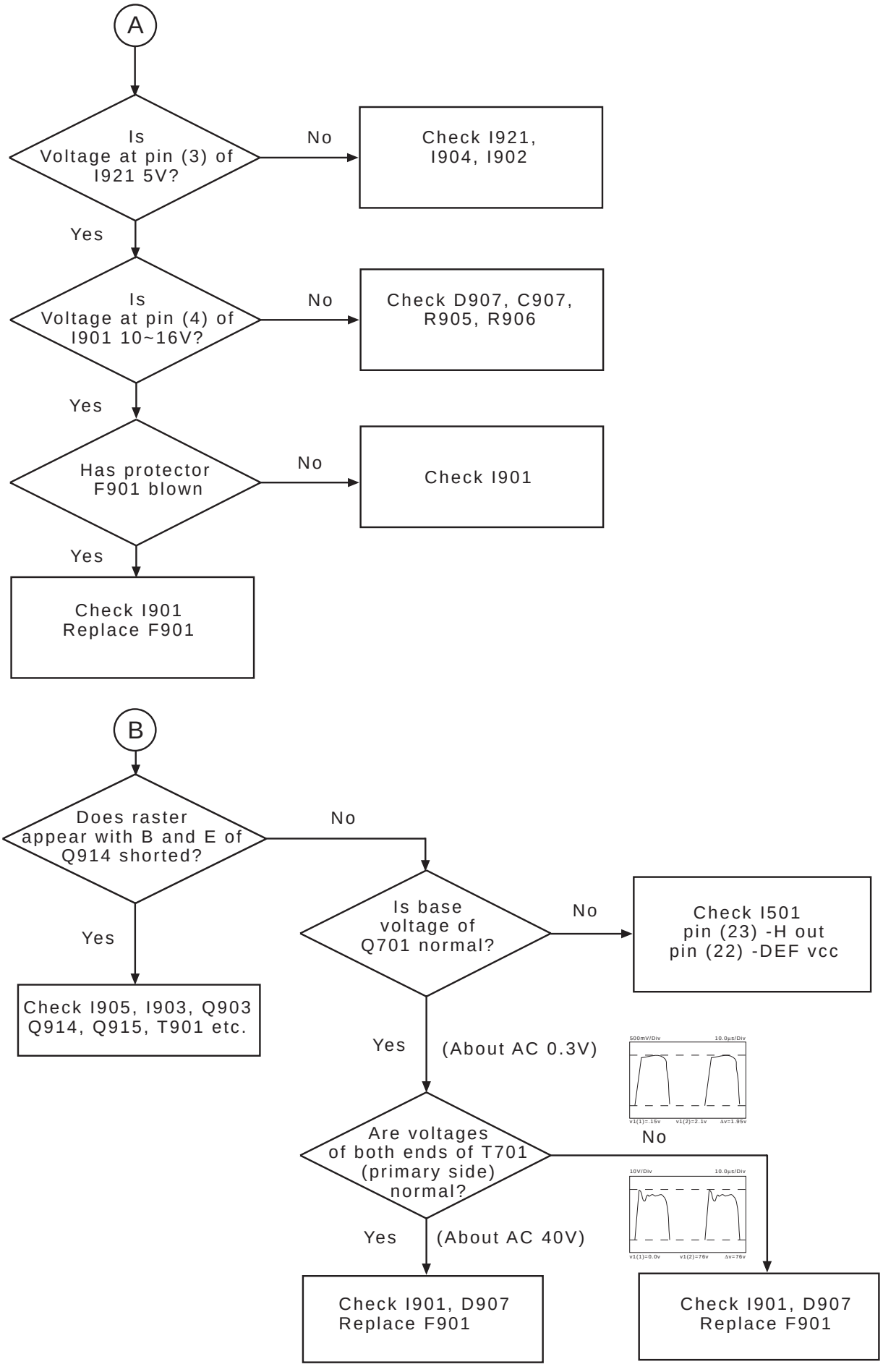


FOCUS PACK (UFPK)

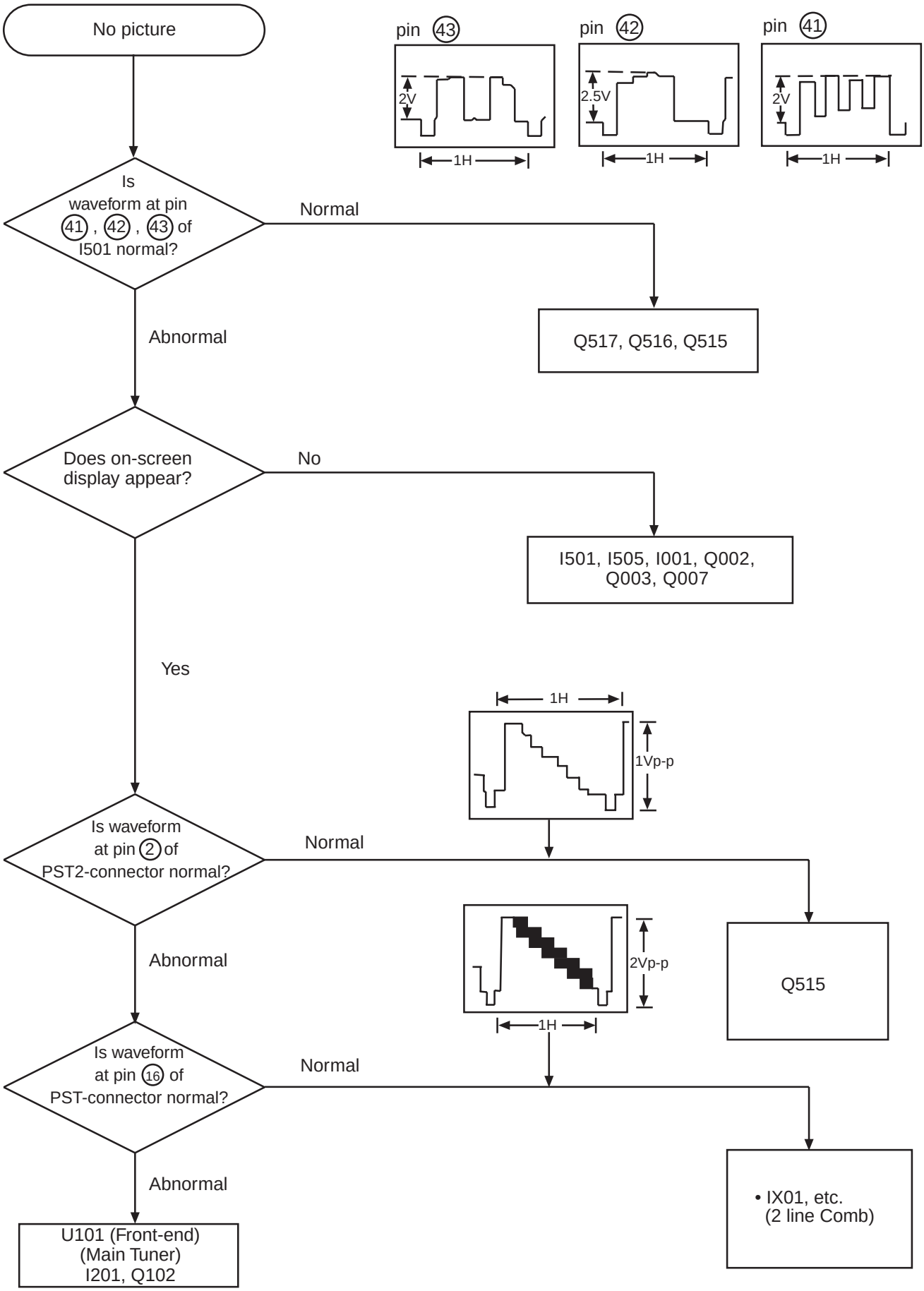


1. No Raster and No Power (REPAIR METHOD)


No raster
Is Power Indicator Red LED "ON"? D923
No
Check DIAGNOSIS LED's
Yes
Check HV-PROTECT line D011, D012, D018
Is Red LED "ON"? PROTECTION D923
No
A
Yes
Check Connector PY1, I501 etc.
How to check DIAGNOSIS LED's.
1. Turn OFF power SW.
2. Turn ON again after several seconds, and carefully observe 3 green LEDs.
Did 3 green LED's turn OFF same time?
No
Yes
B
Find which LED's is going to dark or OFF.
(Other LED's are going to OFF little bit later same time.)
D951(+27V) Check +27V line D914, Q902 IK04, IK05 etc.
D946(+B) (Change Brightness, always on) Check +B 120V line F931, 0777, I905
D947 (30/34V) Check Audio 30V line D913, I401 etc.

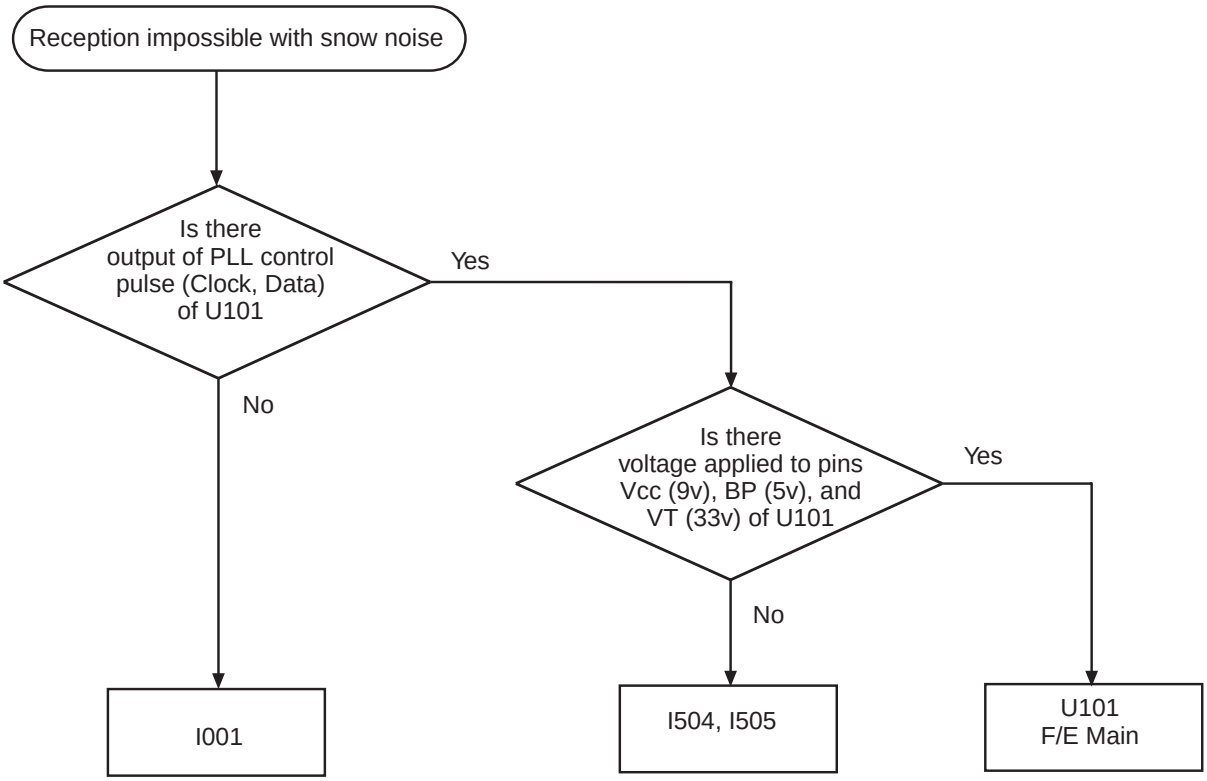

A
Is Voltage at pin (3) of I921 5V?
No
Check I921, I904, I902
Yes
Is Voltage at pin (4) of I901 10~16V?
No
Check D907, C907, R905, R906
Yes
Has protector F901 blown
No
Check I901
Yes
Check I901 Replace F901
B
Does raster appear with B and E of Q914 shorted?
No
Yes
Check I905, I903, Q903 Q914, Q915, T901 etc.
Is base voltage of Q701 normal?
No
Check I501 pin (23) -H out pin (22) -DEF vcc
Yes
(About AC 0.3V)
Are voltages of both ends of T701 (primary side) normal?
No
Yes
(About AC 40V)
Check I901, D907 Replace F901
Check I901, D907 Replace F901

2. No Picture

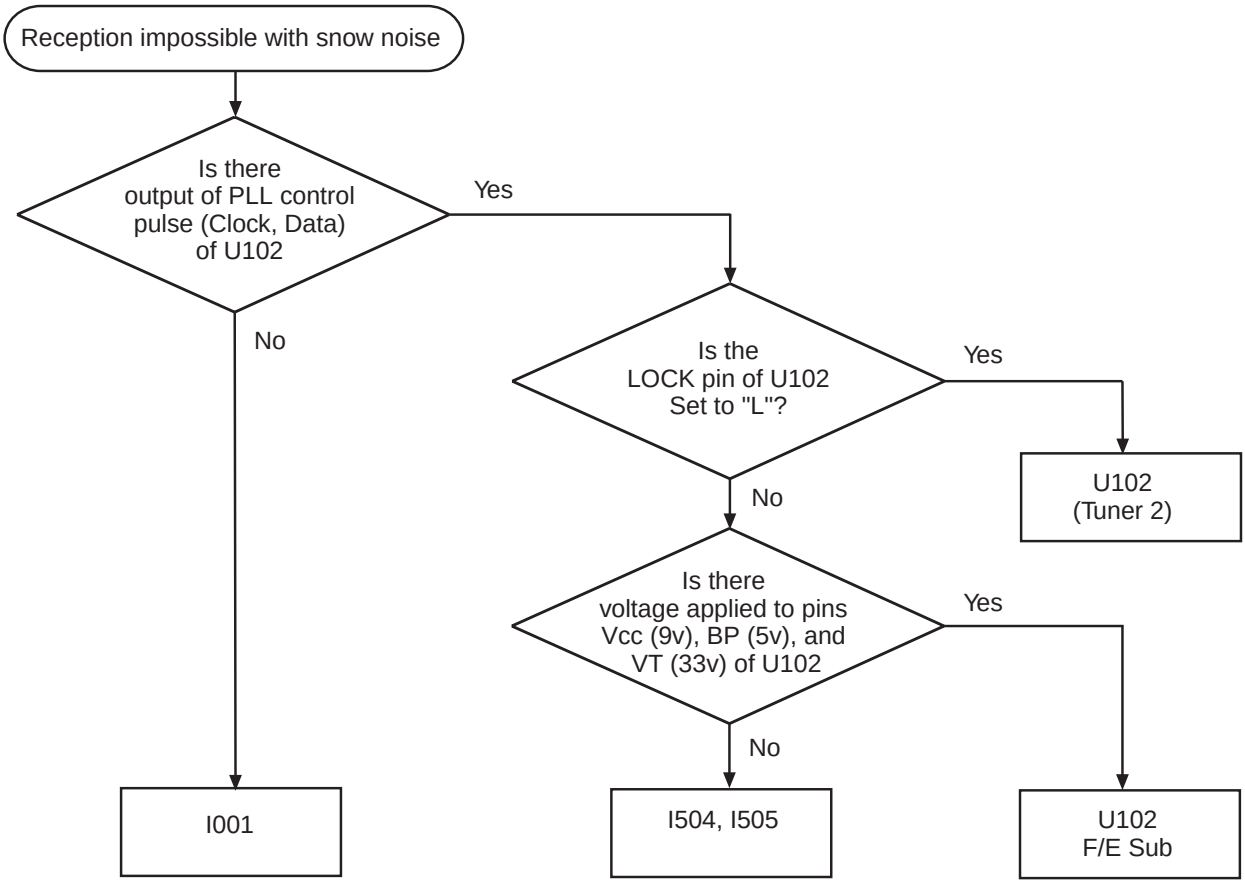

No picture
pin 43
2V
1H
pin 42
2.5V
1H
pin 41
2V
1H
Is waveform at pin 41 , 42 , 43 of I501 normal?
Normal
Q517, Q516, Q515
Abnormal
Does on-screen display appear?
No
I501, I505, I001, Q002, Q003, Q007
Yes
1H
1Vp-p
Is waveform at pin 2 of PST2-connector normal?
Normal
Q515
Abnormal
2Vp-p
1H
Is waveform at pin 16 of PST-connector normal?
Normal
• IX01, etc.
(2 line Comb)
Abnormal
U101 (Front-end)
(Main Tuner)
I201, Q102

3. Reception Impossible with Snow Noise

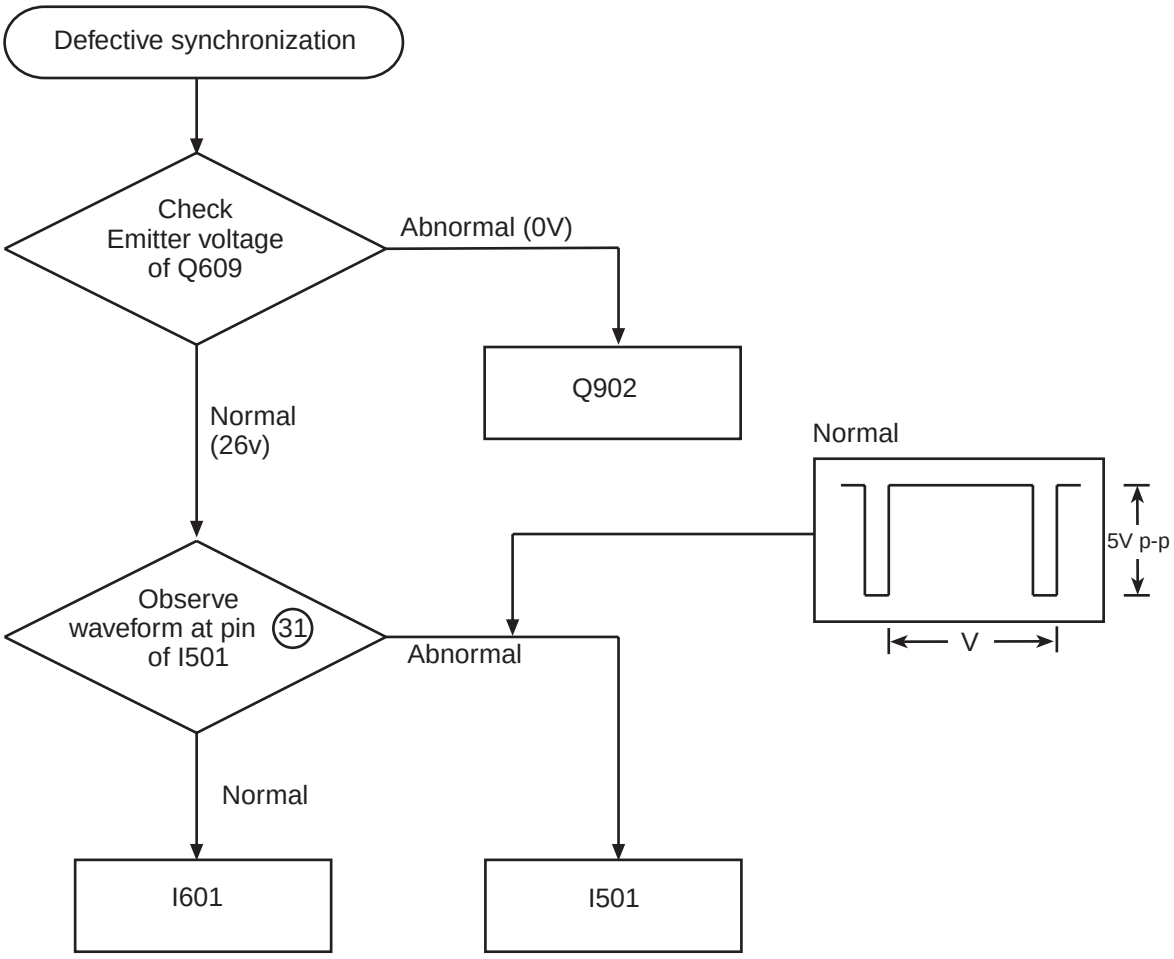
Main Picture


Reception impossible with snow noise
Is there output of PLL control pulse (Clock, Data) of U101
Yes
No
Is there voltage applied to pins Vcc (9v), BP (5v), and VT (33v) of U101
Yes
No
I001
I504, I505
U101 F/E Main

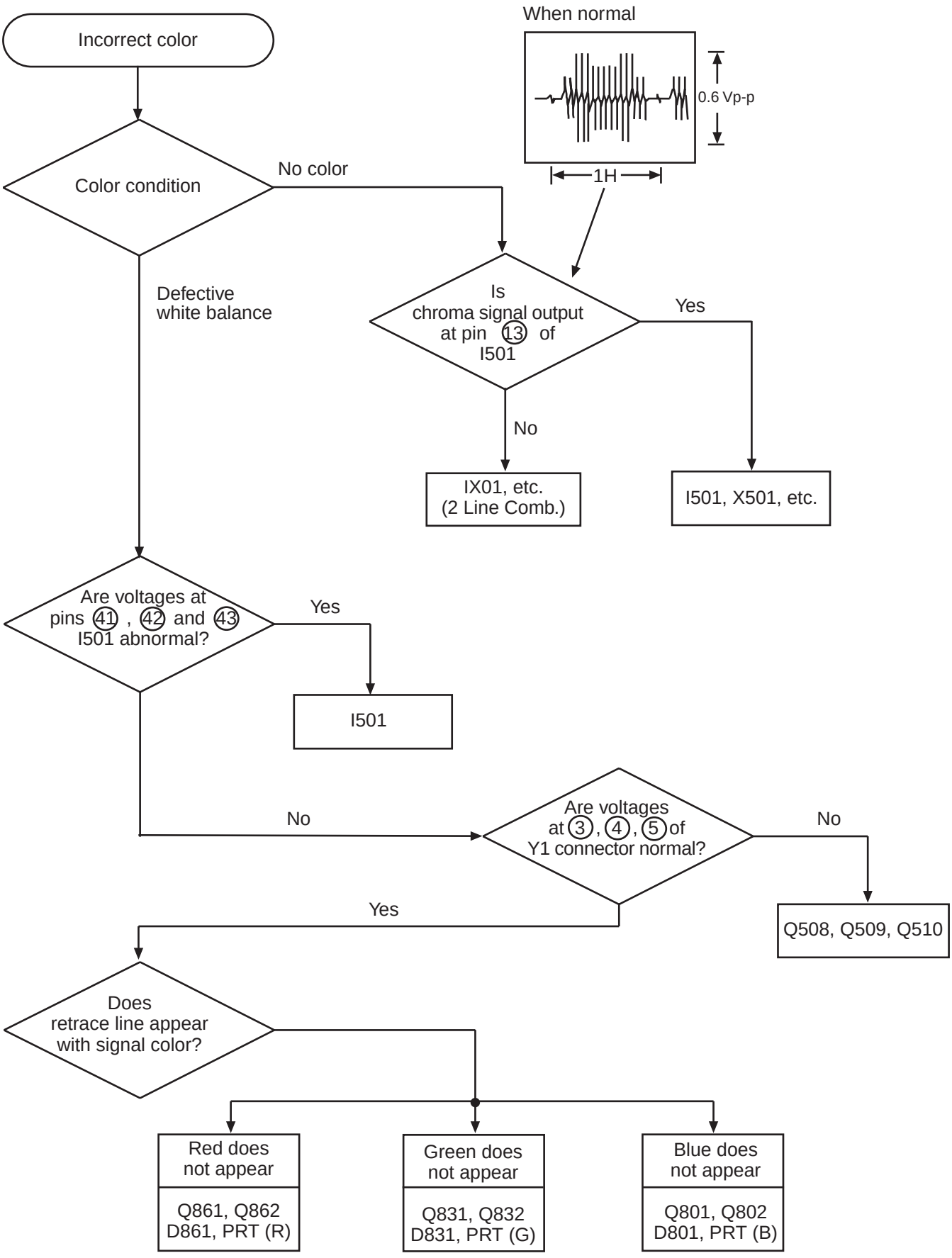
Sub Picture (PIP)



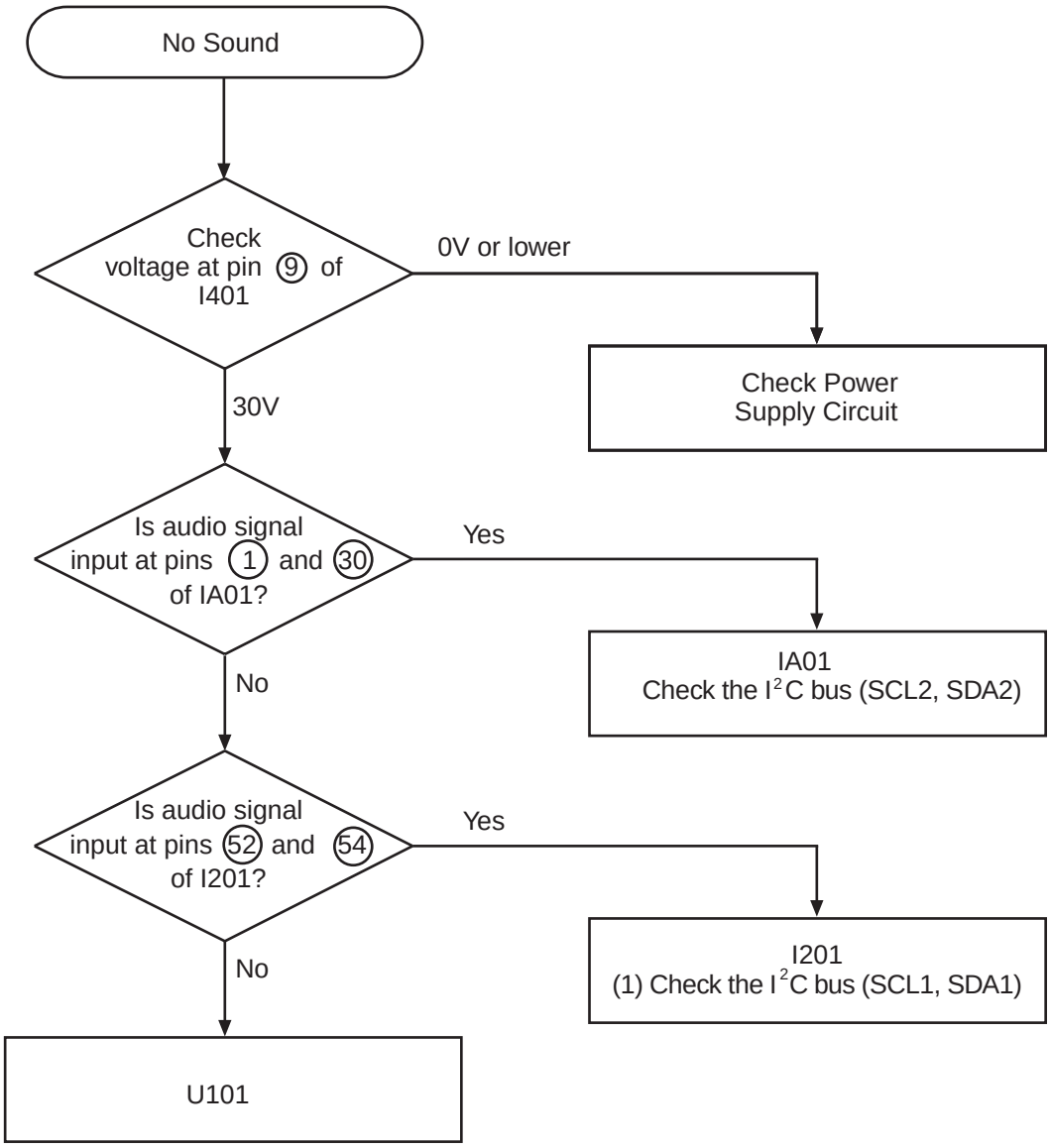
4. Defective Synchronization



5. Incorrect Color



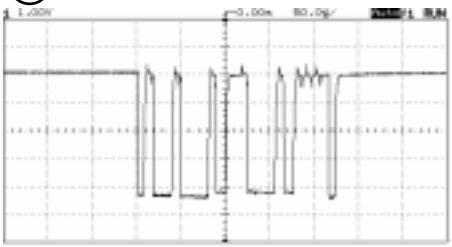
6. No Sound


No Sound
Check voltage at pin (9) of I401
0V or lower
Check Power Supply Circuit
30V
Is audio signal input at pins (1) and (30) of IA01?
Yes
IA01
Check the I2C bus (SCL2, SDA2)
No
Is audio signal input at pins (52) and (54) of I201?
Yes
I201
(1) Check the I2C bus (SCL1, SDA1)
No
U101

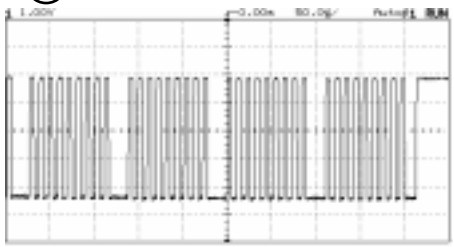
WAVEFORMS AT EACH SECTION

Numbers inside circle correspond to locations shown in the circuit diagram.

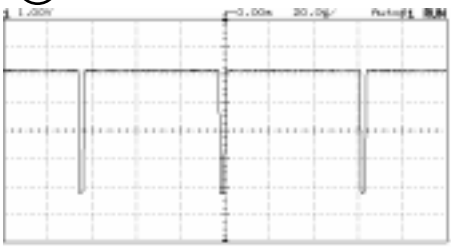
(1) I001 Pin 2



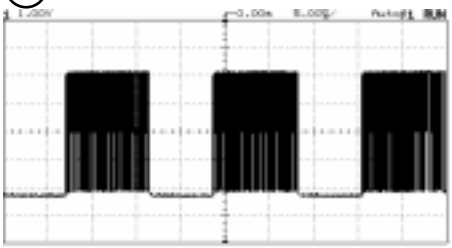
(2) I001 Pin 3



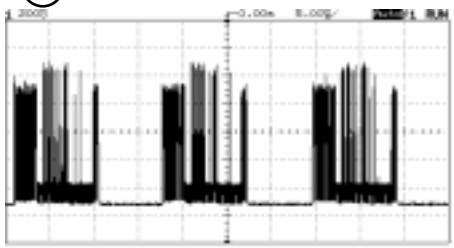
(3) I001 Pin 39



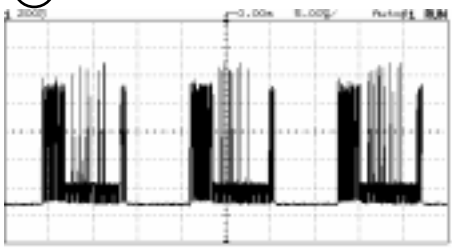
(4) I001 Pin 41



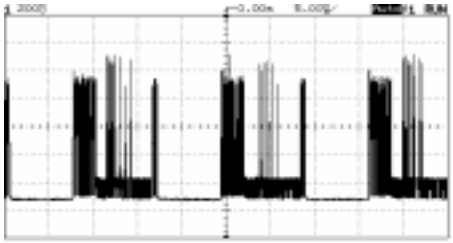
(5) I001 Pin 42



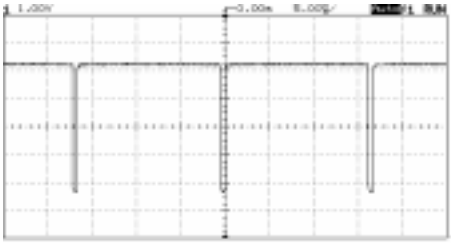
(6) I001 Pin 43



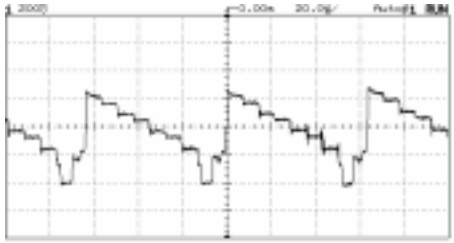
(7) I001 Pin 44



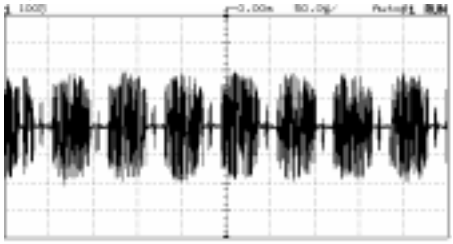
(8) I001 Pin 55



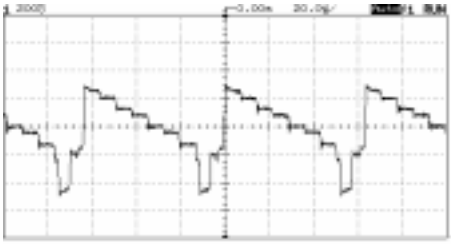
(9) I501 Pin 4



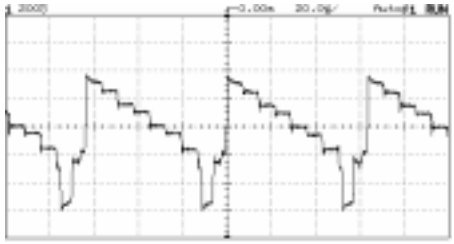
(10) I501 Pin 13



(11) I501 Pin 15



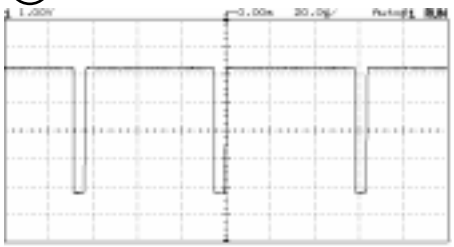
(12) I501 Pin 17



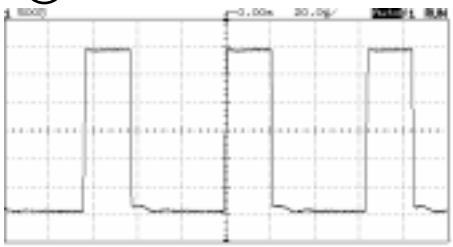
WAVEFORMS AT EACH SECTION

Numbers inside circle correspond to locations shown in the circuit diagram.

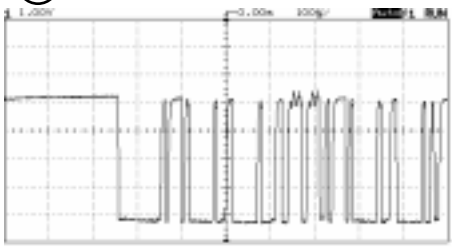
(13) I501 Pin 18



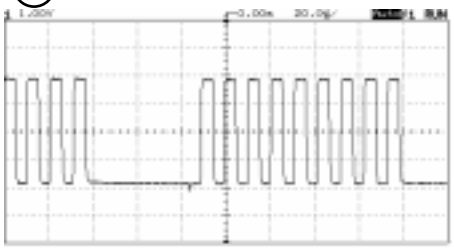
(14) I501 Pin 23



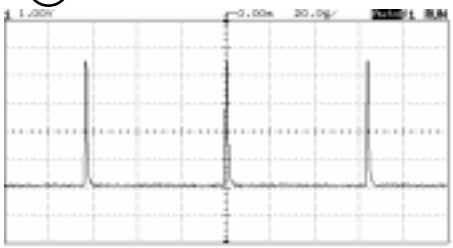
(15) I501 Pin 27



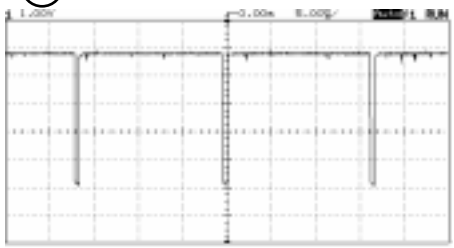
(16) I501 Pin 28



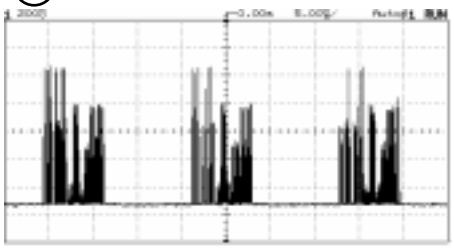
(17) I501 Pin 30



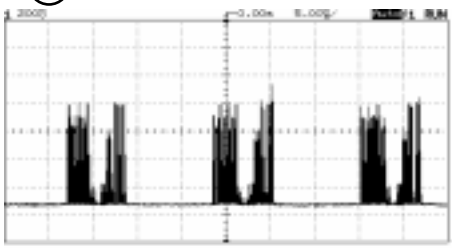
(18) I501 Pin 31



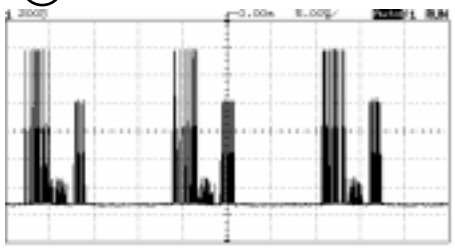
(19) I501 Pin 33



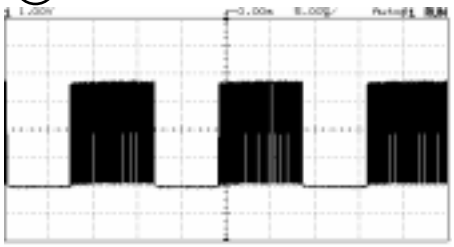
(20) I501 Pin 34



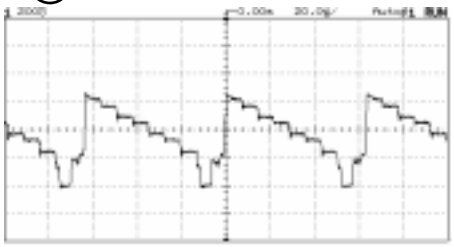
(21) I501 Pin 35



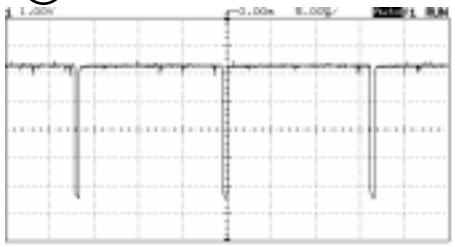
(22) I501 Pin 36



(23) I501 Pin 53



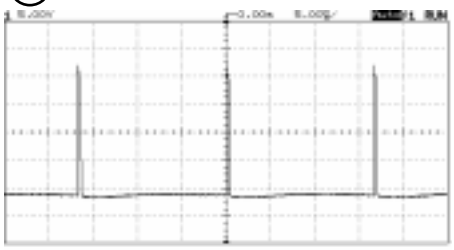
(24) I601 Pin 2



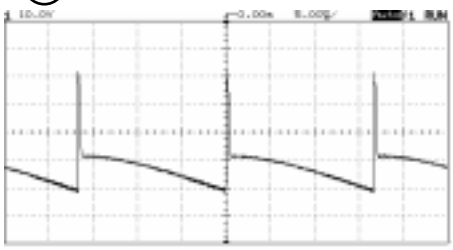
WAVEFORMS AT EACH SECTION

Numbers inside circle correspond to locations shown in the circuit diagram.

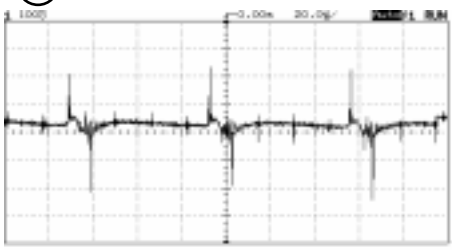
(25) I601 Pin 9



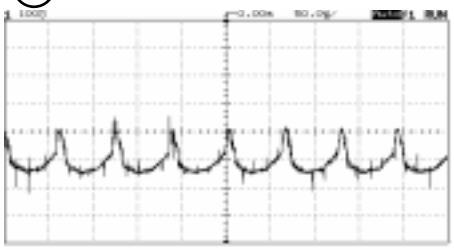
(26) I601 Pin 12



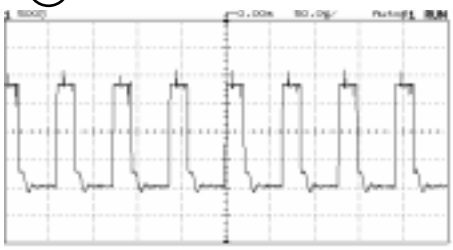
(27) PSD1 Pin 5



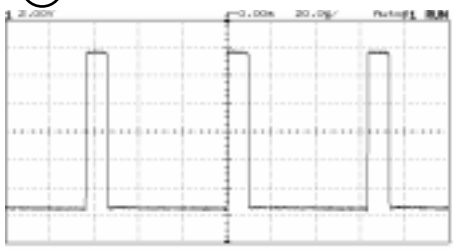
(28) PSD1 Pin 6



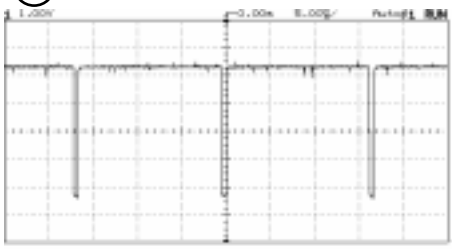
(29) PSD2 Pin 1



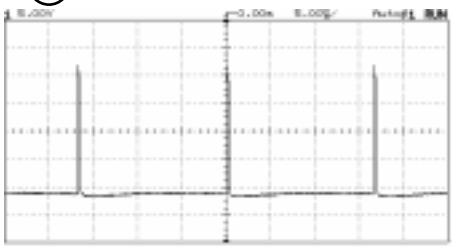
(30) PSD2 Pin 2



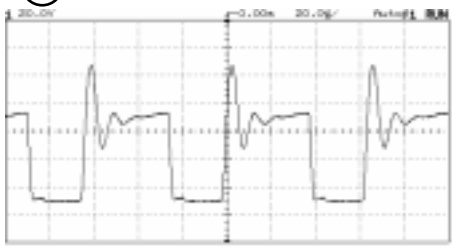
(31) PSD2 Pin 10



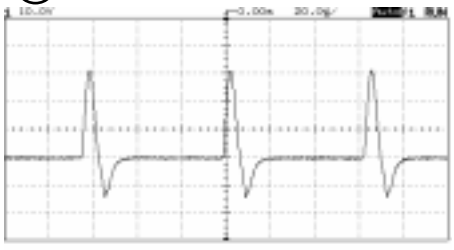
(32) PSD2 Pin 11



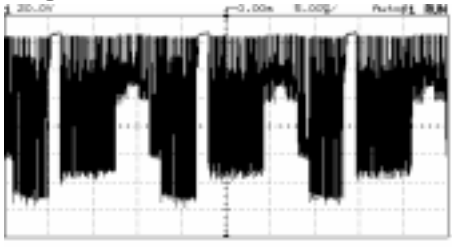
(33) Q701 Collector



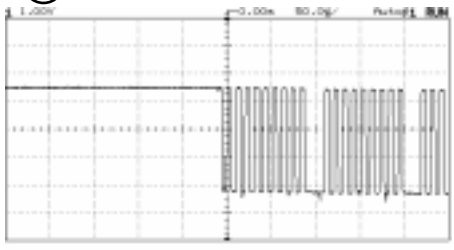
(34) Q777 Collector



(35) Q831 Collector



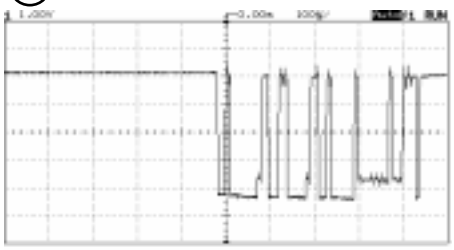
(36) U101 Pin 4



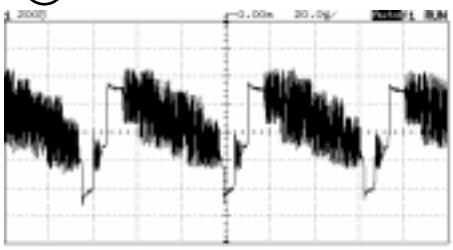
WAVEFORMS AT EACH SECTION

Numbers inside circle correspond to locations shown in the circuit diagram.

(37) U101 Pin 5



(38) U101 Pin 18



DC Voltages

Signal (ucon)

Circuit No.	Pin No.	Voltage DC
I001	1	0.0
	2	4.8
	3	4.7
	4	4.9
	5	2.3
	6	2.5
	7	4.9
	8	4.9
	9	3.9
	10	3.4
	11	0.0
	12	4.9
	13	4.9
	14	4.9
	15	4.9
	16	4.3
	17	4.3
	18	4.9
	19	0.0
	20	0.0
	21	2.3
	22	4.9
	23	0.0
	24	2.3
	25	1.3
	26	2.0
	27	2.0
	28	4.8
	29	0.1
	30	0.0
	31	0.6
	32	0.6
	33	2.3
	34	3.6
	35	0.0
	36	4.9
	37	0.0
	38	0.0
	39	4.7
	40	0.0
	41	0.0
	42	0.0
	43	0.0
	44	0.0
	45	3.4
	46	1.6
	47	0.0
	48	0.0

Circuit No.	Pin No.	Voltage DC
I001	49	4.9
	50	0.0
	51	1.0
	52	0.0
	53	4.8
	54	0.0
	55	0.0
	56	4.9
	57	4.9
	58	0.0
	59	4.8
	60	4.7
	61	4.9
	62	2.4
	63	2.5
	64	0.0
I002	1	0.0
	2	0.0
	3	0.0
	4	0.0
	5	4.8
	6	0.0
	7	0.0
	8	4.9
I003	1	0.0
	2	3.6
	3	9.0
	4	0.0
	5	0.0
	6	4.2
I004	1	0.2
	2	0.0
	3	0.4
	4	0.4
	5	0.4
	6	0.4
	7	0.4
	8	0.0
	9	0.0
	10	2.4
	11	0.0
	12	0.0
	13	0.0
	14	4.8

Circuit No.	Pin No.	Voltage DC
I004	15	4.0
	16	4.9
I005	1	4.9
	2	0.0
	3	4.9

Circuit No.	Pin Name	Voltage DC
Q002	E	0.0
	B	0.1
	C	4.8
Q003	E	0.0
	B	0.7
	C	0.2
Q004	E	0.6
	B	0.0
	C	4.9
Q005	E	0.0
	B	0.6
	C	0.0
Q006	E	0.0
	B	0.0
	C	4.4
Q007	E	0.0
	B	0.0
	C	4.7
Q008	E	0.2
	B	0.4
	C	2.5
Q009	E	0.2
	B	0.6
	C	2.4
Q010	E	5.2
	B	0.0
	C	8.9
Q011	E	5.1
	B	4.9
	C	8.9
Q012	E	0.0
	B	0.2
	C	0.0
Q013	E	0.0
	B	0.2
	C	4.3

Circuit No.	Pin Name	Voltage DC
Q014	E	0.0
	B	0.0
	C	0.1
Q015	E	5.2
	B	5.2
	C	0.4
Q016	E	4.2
	B	3.6
	C	0.0
Q017	E	13.4
	B	13.4
	C	0
Q018	E	13.4
	B	13.3
	C	0.0
Q019	E	4.1
	B	3.5
	C	0.0
Q021	E	0
	B	0.2
	C	4.3
Q022	E	3.1
	B	3.1
	C	0.6
Q023	E	4.5
	B	5.1
	C	0.0
Q024	E	4.5
	B	5.2
	C	8.9
Q025	E	0.0
	B	0.0
	C	4.9
Q029	E	0.0
	B	0.7
	C	0.1
Q030	E	4
	B	4.7
	C	4.9
Q031	E	4.1
	B	4.7
	C	4.9

DC Voltages

Front End and Audio

Circuit No.	Pin No.	Voltage DC
I401	1	1.5
	2	0.0
	3	0.0
	4	0.0
	5	1.5
	6	10.7
	7	14.4
	8	5.1
	9	31.8
	10	0.0
	11	4.2
	12	14.2

Circuit No.	Pin Name	Voltage DC
Q102	E	1.5
	B	2.1
	C	9.0
Q103	E	1.5
	B	2.2
	C	9.0
Q105	B	0.1
	C	5.0
Q106	E	0.0
	B	0.1
	C	5.0

Circuit No.	Pin Name	Voltage DC
Q401	E	0.0
	B	0.0
	C	0.0
Q402	E	0.0
	B	0.0
	C	0.0
Q403	E	0.0
	B	0.0
	C	4.4
Q404	E	0.0
	B	0.0
	C	10.7

DC Voltages

Video Chroma

Circuit No.	Pin No.	Voltage DC
I501	1	3.1
	2	1.1
	3	4.0
	4	2.0
	5	2.7
	6	2.7
	7	0.0
	8	4.1
	9	4.1
	10	4.1
	11	2.0
	12	4.9
	13	2.5
	14	0.0
	15	2.6
	16	6.4
	17	2.5
	18	0.0
	19	0.0
	20	7.5
	21	0.0
	22	9.0
	23	1.2
	24	4.5
	25	1.5
	26	0.0
	27	4.8
	28	4.0
	29	8.7
	30	0.0
	31	4.8
	32	0.0
	33	3.5
	34	3.5
	35	3.5
	36	0.0
	37	3.5
	38	3.5
	39	3.5
	40	8.9
	41	2.8
	42	2.7
	43	2.6
	44	0.0
	45	5.5
	46	8.9
	47	0.0
	48	3.5

Circuit No.	Pin No.	Voltage DC
I501	49	5.3
	50	5.3
	51	4.9
	52	4.9
	53	6.4
	54	6.0
	55	2.9
	56	0.0
I502	1	4.6
	2	0.0
	3	3.9
	4	0.0
	5	3.9
	6	0.0
	7	0.1
	8	3.0
	9	5.0
	10	0.0
	11	4.6
	12	0.1
	13	9.0
	14	4.6
	15	0.0
	16	4.6
I503	1	0.1
	2	4.5
	3	9.0
	4	5.2
	5	0.0
	6	5.2
I504	1	7.0
	2	0.0
	3	5.0
I505	1	11.0
	2	0.3
	3	9.0

Circuit No.	Pin Name	Voltage DC
Q510	E	3.5
	B	2.8
	C	0.0
Q511	E	3.0
	B	3.6
	C	9.0
Q512	E	0.0
	B	0.6
	C	0.0
Q513	E	3.3
	B	3.9
	C	9.0
Q514	E	0.5
	B	0.0
	C	9.0
Q515	E	2.4
	B	1.7
	C	0.0
Q516	E	5.2
	B	4.5
	C	0.0
Q517	E	0.0
	B	0.0
	C	0.0
Q519	E	0.0
	B	0.0
	C	12.3
Q520	E	0.5
	B	0.9
	C	10.8
Q521	E	0.0
	B	0.0
	C	13.4
Q522	E	13.5
	B	13.5
	C	-1.8
Q523	E	0.0
	B	0.0
	C	0.7

DC Voltages

Deflection

Circuit No.	Pin No.	Voltage DC
I601	1	11.3
	2	4.8
	3	5.6
	4	5.8
	5	0.0
	6	5.2
	7	5.7
	8	24.7
	9	1.5
	10	1.4
	11	0.0
	12	13.2
	13	24.4

Circuit No.	Pin Name	Voltage DC
Q602	E	8.6
	B	8.0
	C	0.9
Q603	E	7.9
	B	7.3
	C	1.9
Q607	E	11.3
	B	10.8
	C	8.7
Q609	E	25.1
	B	24.8
	C	0.0
Q610	E	0.5
	B	0.9
	C	23.1
Q611	E	0.0
	B	0.5
	C	23.1
Q612	E	23.3
	B	23.1
	C	0.0
Q701	E	0.0
	B	0.4
	C	43.1
Q702	E	4.4
	B	4.3
	C	12.1
Q703	E	8.9
	B	8.3
	C	1.9
Q710	E	1.9
	B	1.4
	C	12.2
Q777	E	0.0
	B	0.0
	C	121.0

DC Voltages

Power Supply

Circuit No.	Pin No.	Voltage DC
I901	1	2.0
	2	0.0
	3	164.3
	4	18.9
	5	0.0
I902	1	10.9
	2	10.0
	3	-10.2
	4	-7.6
I903	1	6.6
	2	7.0
	3	2.0
	4	5.0
I904	1	7.5
	2	61.7
	3	61.7
	4	62.8
	5	216.3
	6	0.0
	7	61.7
	8	61.7
I905	1	120.0
	2	9.9
	3	0.0

Circuit No.	Pin No.	Voltage DC
I907	1	1.5
	2	0.0
	3	61.6
	4	62.7
I921	1	7.8
	2	0.0
	3	5.0
I923	1	25.0
	2	0.0
	3	12.1
I924	1	0.0
	2	24.9
	3	12.2

Circuit No.	Pin Name	Voltage DC
Q909	E	67.2
	B	67.2
	C	61.5
Q910	E	3.3
	B	3.7
	C	18.9
Q911	E	67.2
	B	33.6
	C	61.4
Q914	E	0.0
	B	0.1
	C	5.0
Q915	E	5.0
	B	5.0
	C	0.0
Q931	E	0.0
	B	0.8
	C	0.4

Convergence

Circuit No.	Pin No.	Voltage DC
IK01	1	8.0
	2	0.0
	3	5.0
IK02	1	2.5
	2	5.2
	3	0.0

Circuit No.	Pin No.	Voltage DC
IK04	1	0.0
	2	0.0
	3	31.4
	4	32.5
	5	36.8
	6	0.0
	7	0.0
	8	24.6
	9	0.0
	10	28.6
	11	0.0
	12	24.6
	13	0.0
	14	0.0
	15	0.3
	16	0.3
	17	24.6
	18	0.3
IK05	1	0.0
	2	0.0
	3	31.3
	4	32.5
	5	36.8
	6	0.0
	7	0.0
	8	24.6
	9	0.0
	10	28.6
	11	0.5
	12	24.7
	13	0.4
	14	0.4
	15	0.0
	16	0.0
	17	24.6
	18	0.0

DC Voltages

SRS

Circuit No.	Pin No.	Voltage DC
IA01	1	4.5
	2	0.0
	3	0.0
	4	4.5
	5	0.0
	6	0.0
	7	4.5
	8	0.0
	9	1.0
	10	4.5
	11	1.3
	12	1.3
	13	4.9
	14	3.7
	15	0.0
	16	9.0
	17	0.0
	18	0.0
	19	0.0
	20	1.4
	21	4.5
	22	4.4
	23	4.5
	24	4.5
	25	4.5
	26	4.5
	27	4.5
	28	0.0
	29	0.0
	30	4.5

Circuit No.	Pin No.	Voltage DC
IA07	1	5.0
	2	0.0
	3	5.0
	4	0.0
	5	5.0
	6	5.0
	7	5.0
	8	9.0

Circuit No.	Pin Name	Voltage DC
QA01	E	1.4
	B	2.1
	C	8.3
QA02	E	9.0
	B	8.3
	C	0.0
QA03	E	1.5
	B	2.1
	C	8.3
QA04	E	9.0
	B	8.3
	C	4.8
QA05	E	0.0
	B	0.0
	C	0.0
QA06	E	0.0
	B	0.0
	C	0.0

VM

Circuit No.	Pin Name	Voltage DC
QE01	E	0.8
	B	1.5
	C	7.5
QE02	E	2.1
	B	2.8
	C	6.0
QE03	E	0.0
	B	6.0
	C	12.2
QE04	E	1.3
	B	2.0
	C	4.9

Circuit No.	Pin Name	Voltage DC
QE05	E	1.2
	B	1.9
	C	13.3
QE06	E	14.0
	B	14.0
	C	24.7
QE07	E	14.0
	B	0.0
	C	0.0
QE08	E	116.2
	B	115.5
	C	57.4
QE09	E	0.2
	B	0.8
	C	57.3
QE10	E	0.0
	B	0.0
	C	0.0
QE11	E	1.6
	B	2.1
	C	12.2
QE12	E	14.1
	B	13.9
	C	0.0

DC Voltages

3DYC and PinP

Circuit No.	Pin No.	Voltage DC
IG02	1	1.4
	2	1.4
	3	0.0
	4	0.2
	5	0.0
	6	4.1
	7	3.3
	8	0.0
	9	3.3
	10	0.3
	11	0.4
	12	0.4
	13	0.4
	14	0.0
	15	0.4
	16	0.4
	17	0.4
	18	0.0
	19	3.2
	20	0.0
	21	3.3
	22	3.2
	23	0.0
	24	0.1
	25	1.2
	26	0.6
	27	2.1
	28	1.9

Circuit No.	Pin Name	Voltage DC
QG01	E	0.7
	B	0.0
	C	0.0
QG02	E	0.7
	B	0.0
	C	0.0
QG03	E	0.7
	B	0.0
	C	0.0
QG04	E	0.0
	B	0.7
	C	0.2

CPT

Circuit No.	Pin Name	Voltage DC
Q801	E	11.5
	B	12.4
	C	145.9
Q802	E	3.2
	B	3.6
	C	11.4
Q803	E	11.4
	B	11.5
	C	12.1
Q804	E	3.0
	B	3.2
	C	3.2
Q805	E	1.9
	B	2.6
	C	12.1
Q806	E	2.6
	B	1.9
	C	0.0
Q831	E	11.6
	B	12.1
	C	160.0
Q832	E	3.0
	B	3.5
	C	11.4
Q833	E	11.4
	B	11.6
	C	12.1
Q861	E	11.5
	B	12.1
	C	170.8
Q862	E	2.9
	B	3.4
	C	11.4
Q863	E	11.4
	B	11.4
	C	12.1

Focus

Circuit No.	Pin Name	Voltage DC
QF01	E	1.9
	B	7.8
	C	0.0
QF03	E	1.5
	B	2.1
	C	5.2
QF04	E	5.5
	B	5.2
	C	0.8
QF05	E	0.2
	B	0.7
	C	11.5
QF06	E	11.8
	B	12.1
	C	288.9
QF07	E	441.4
	B	109.5
	C	1093.8
QF08	E	11.2
	B	11.7
	C	657.5
QF09	E	0.3
	B	0.9
	C	8.3
QF10	E	8.7
	B	8.3
	C	0.0
QF11	E	8.7
	B	8.8
	C	12.1
QF12	E	4.6
	B	5.1
	C	12.2
QF13	E	0.9
	B	1.5
	C	5.1
QF14	E	8.4
	B	0.0
	C	12.1
QF15	E	9.0
	B	9.4
	C	12.1

DC Voltages

Terminal

Circuit No.	Pin No.	Voltage DC
IX01	1	0
	2	2.3
	3	0
	4	2.4
	5	0
	6	0
	7	0
	8	0
	9	0
	10	2.3
	11	2.2
	12	3.4
	13	0
	14	0
	15	3.5
	16	0

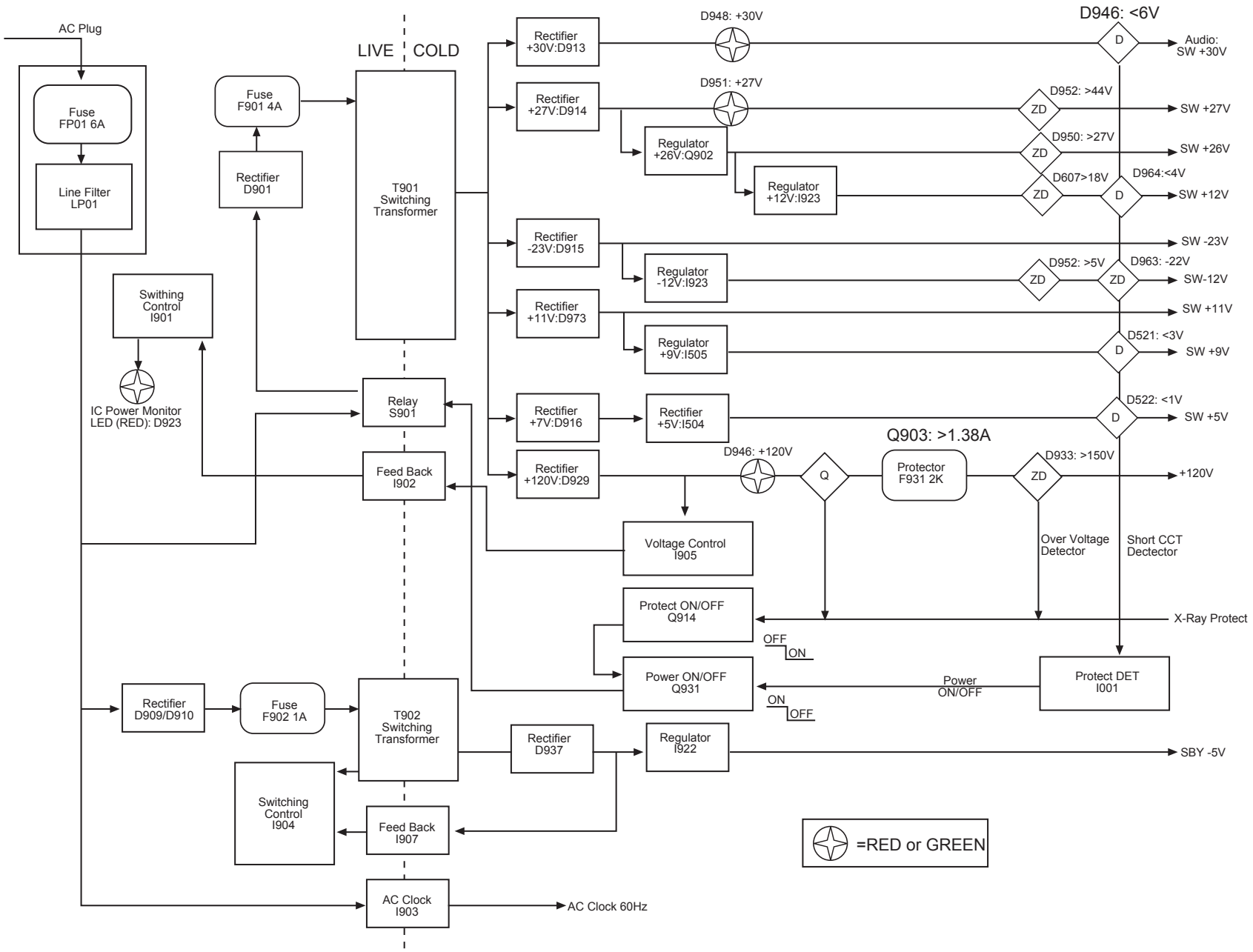
Circuit No.	Pin No.	Voltage DC
QG13	E	2.4
	B	1.7
	C	0.0
QG15	E	0.0
	B	0.7
	C	0.1
QG16	E	0.0
	B	0.1
	C	1.3
QG17	E	0.0
	B	0.0
	C	0.1
QG18	E	0.0
	B	0.1
	C	1.7

Circuit No.	Pin No.	Voltage DC
QX01	E	3.5
	B	4.2
	C	8.9
QX02	E	8.9
	B	8.2
	C	4.2
QX03	E	1.8
	B	2.4
	C	8.2
QX04	E	3.1
	B	3.8
	C	0.0
QX05	E	2.8
	B	3.5
	C	8.9
QX06	E	2.1
	B	2.8
	C	8.2
QX07	E	8.9
	B	8.2
	C	4.4
QX08	E	3.8
	B	4.4
	C	8.9
QX09	E	5.4
	B	6.1
	C	8.9
QX10	E	1.4
	B	2.1
	C	8.9

Circuit No.	Pin Name	Voltage DC
Q203	E	0.0
	B	4.2
	C	8.9
Q206	E	8.9
	B	0.0
	C	3.4
Q207	E	2.2
	B	2.8
	C	8.2
Q208	E	2.5
	B	3.1
	C	8.2
Q209	E	8.9
	B	8.2
	C	3.5
Q210	E	2.9
	B	3.5
	C	8.9

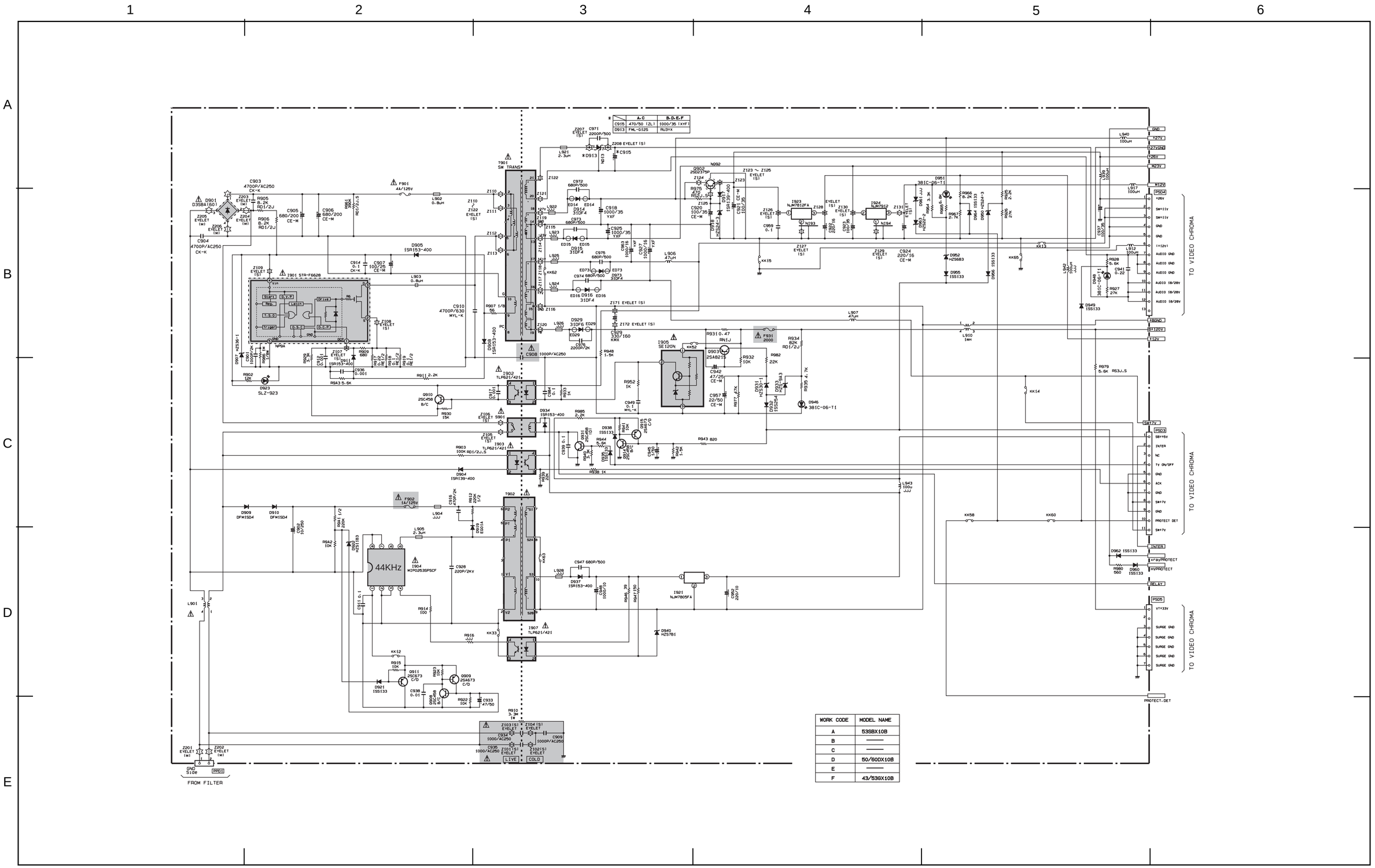
Circuit No.	Pin Name	Voltage DC
Q211	E	2.3
	B	3.0
	C	8.9
Q214	E	3.4
	B	0.0
	C	8.9
Q215	E	3.5
	B	4.2
	C	8.8
Q216	E	3.6
	B	4.3
	C	8.8
Q217	E	3.3
	B	4.0
	C	8.9
Q218	E	3.1
	B	2.5
	C	0.0
Q219	E	0.5
	B	1.1
	C	0.0
Q220	E	0.0
	B	0.5
	C	4.9
Q224	E	0.0
	B	0.0
	C	0.0
Q225	E	0.0
	B	0.2
	C	0.0

HP1X PROTECTION CIRCUIT BLOCK DIAGRAM



PRODUCT SAFETY NOTE: Components marked with a ⚠ and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

BASIC CIRCUIT DIAGRAM



WORK CODE	MODEL NAME
A	53SBX10B
B	——
C	——
D	50/60DX10B
E	——
F	43/53GX10B

- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

POWER SUPPLY

HOME

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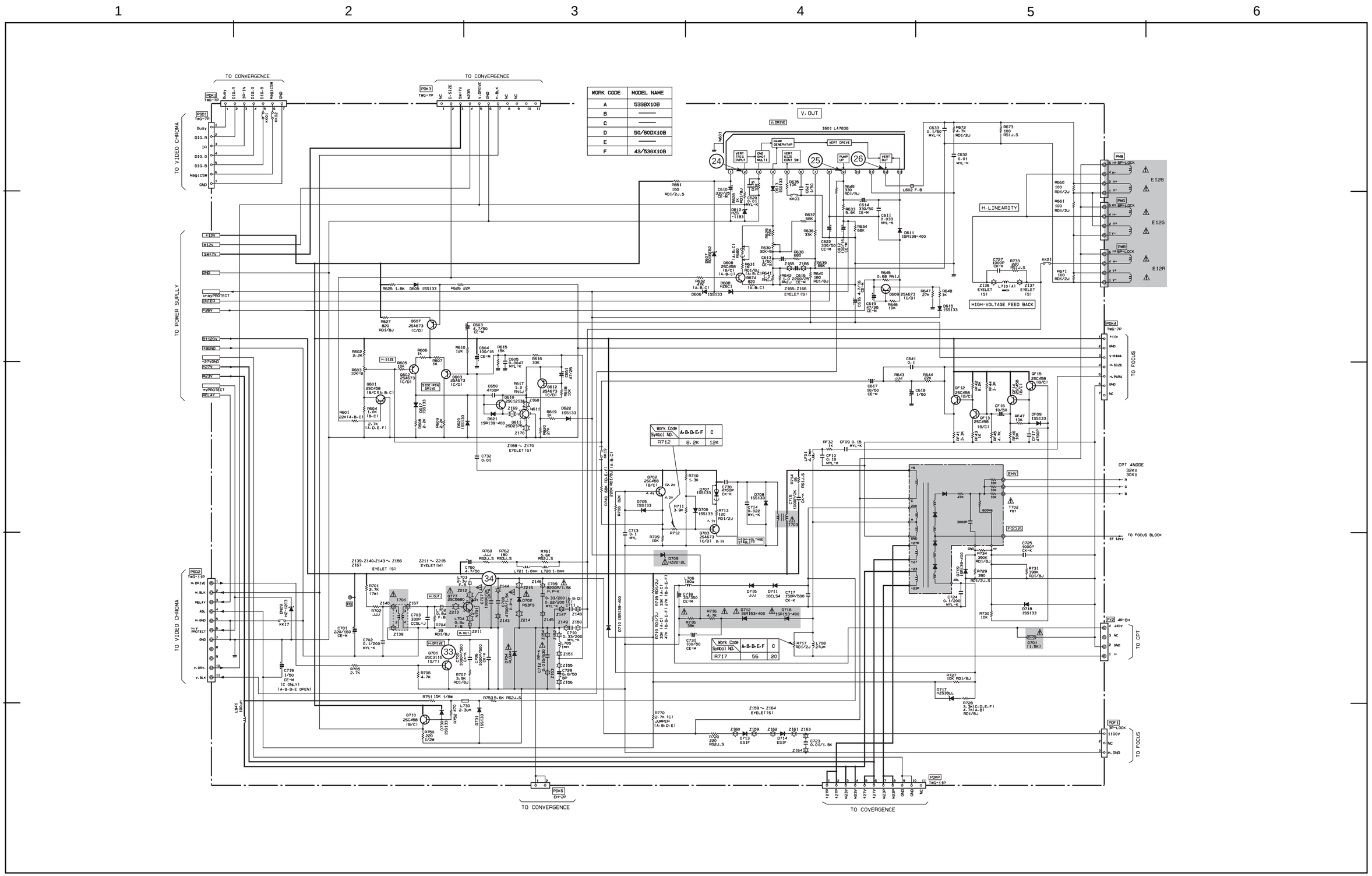
BASIC CIRCUIT DIAGRAM



- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

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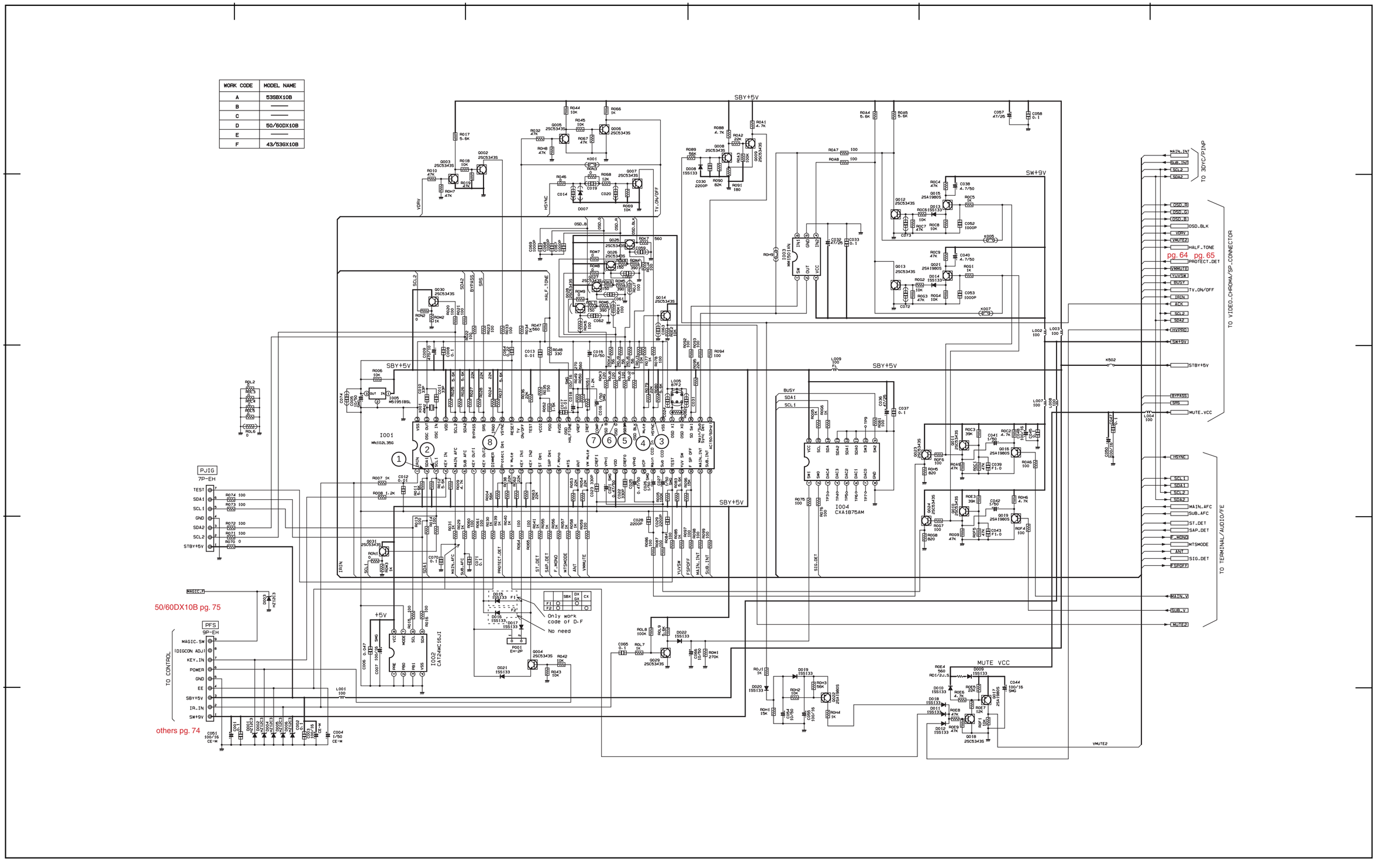
BASIC CIRCUIT DIAGRAM

UCON
HP1X CHASSIS

WORK CODE	MODEL NAME
A	53SBX10B
B	———
C	———
D	50/60DX10B
E	———
F	43/53GX10B



- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

UCON

HOME

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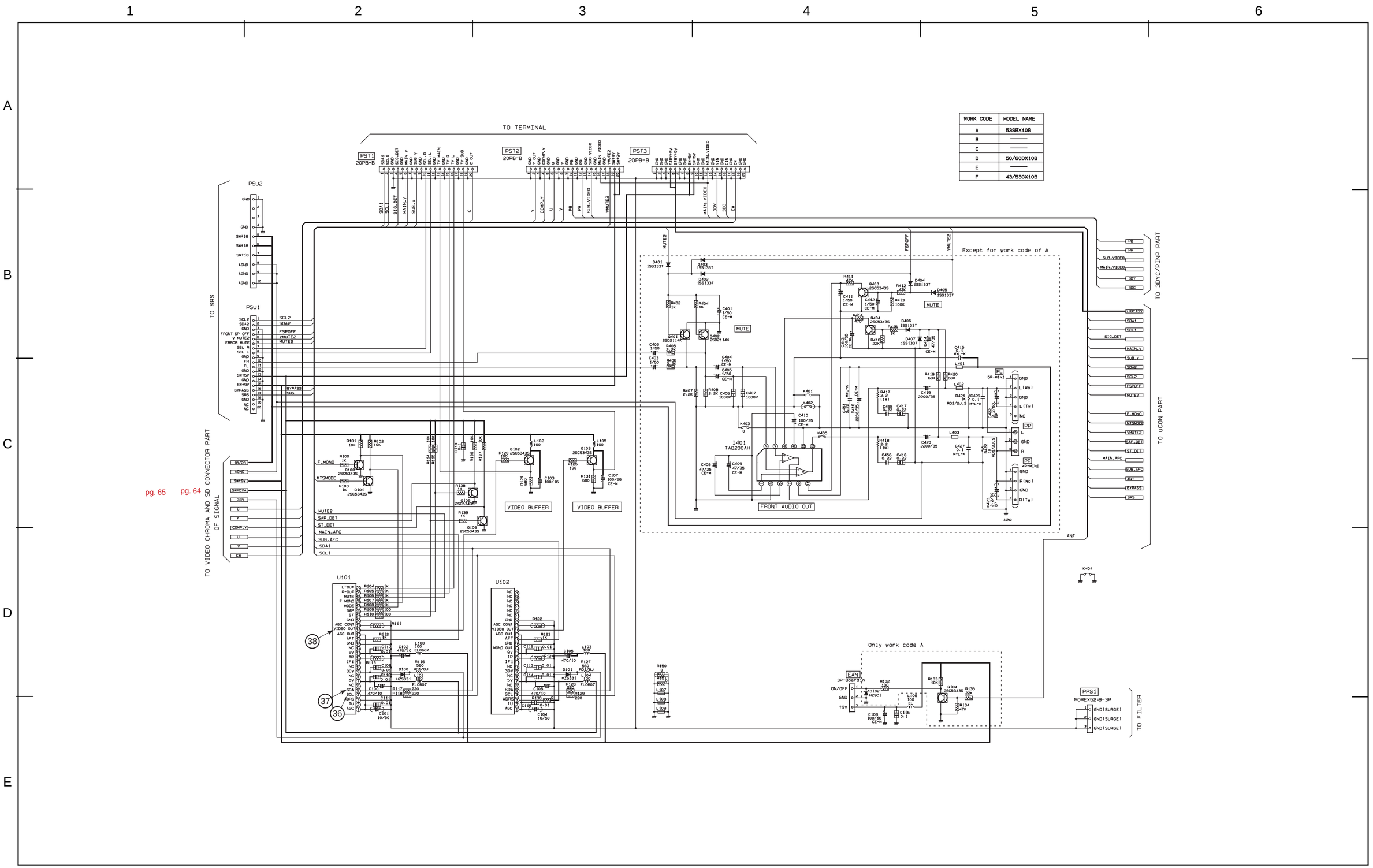
BASIC CIRCUIT DIAGRAM



WORK CODE	MODEL NAME
A	53SBX10B
B	——
C	——
D	50/60DX10B
E	——
F	43/53GX10B

- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

F/E AND AUDIO

HOME

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BASIC CIRCUIT DIAGRAM

WORK CODE	MODEL NAME
A	53SBX10B
B	——
C	——
D	50/60DX10B
E	——
F	43/53GX10B

	A	D	F
R528	22K	6.8K	
C515	33/50	22/50	

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pg. 63
pg. 65

- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

VIDEO CHROMA

HOME

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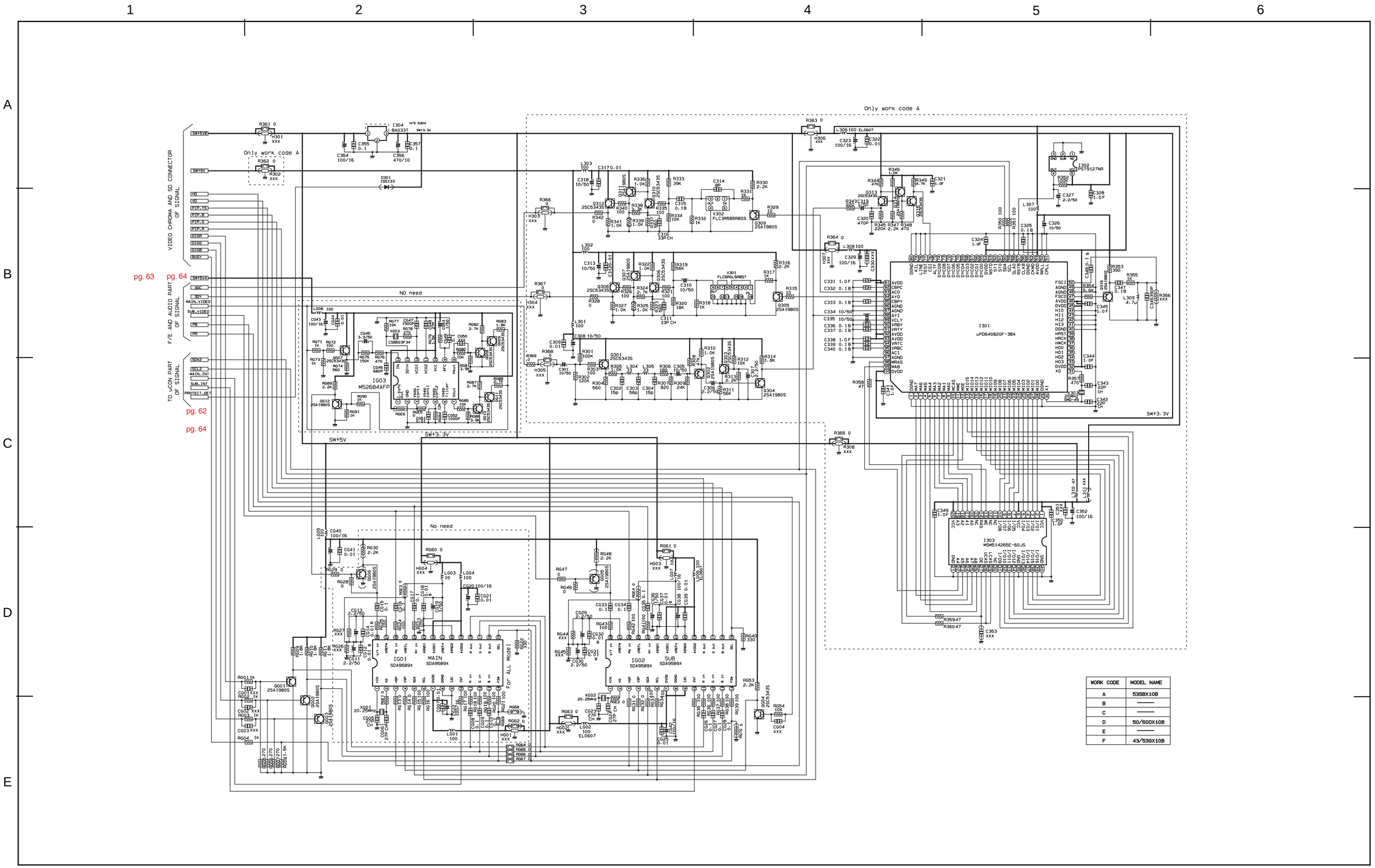
BASIC CIRCUIT DIAGRAM



WORK CODE	MODEL NAME
A	53SBX10B
B	———
C	———
D	50/60DX10B
E	—
F	43/536X10B

- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

HOME

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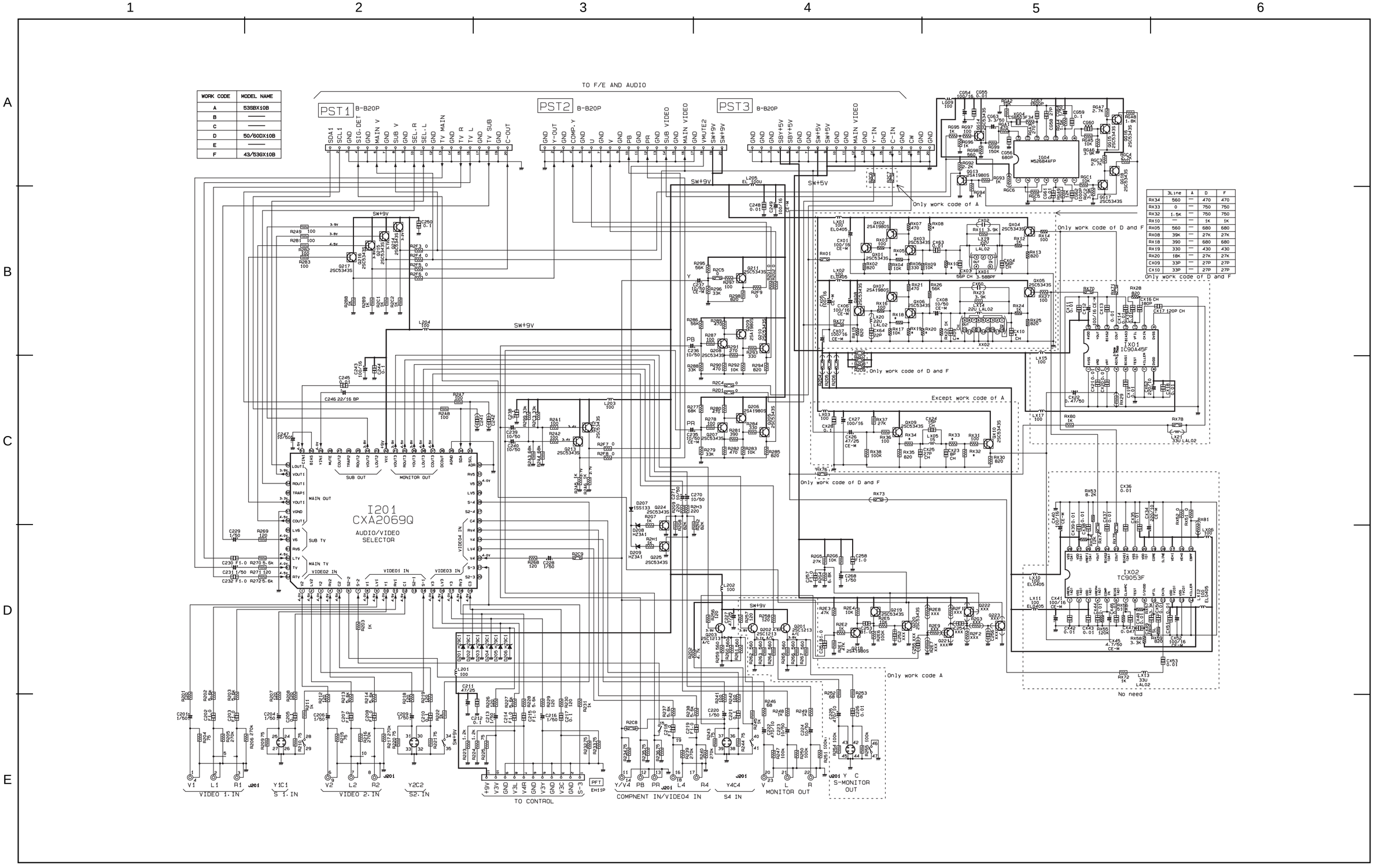
BASIC CIRCUIT DIAGRAM

WORK CODE	MODEL NAME
A	53SBX10B
B	——
C	——
D	50/60DX10B
E	——
F	43/53GX10B



	3Line	A	D	F
RX34	560	—	470	470
RX33	0	—	750	750
RX32	1.5K	—	750	750
RX10	—	—	1K	1K
RX05	560	—	680	680
RX08	39K	—	27K	27K
RX18	390	—	680	680
RX19	330	—	430	430
RX20	18K	—	27K	27K
CX09	33P	—	27P	27P
CX10	33P	—	27P	27P

- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

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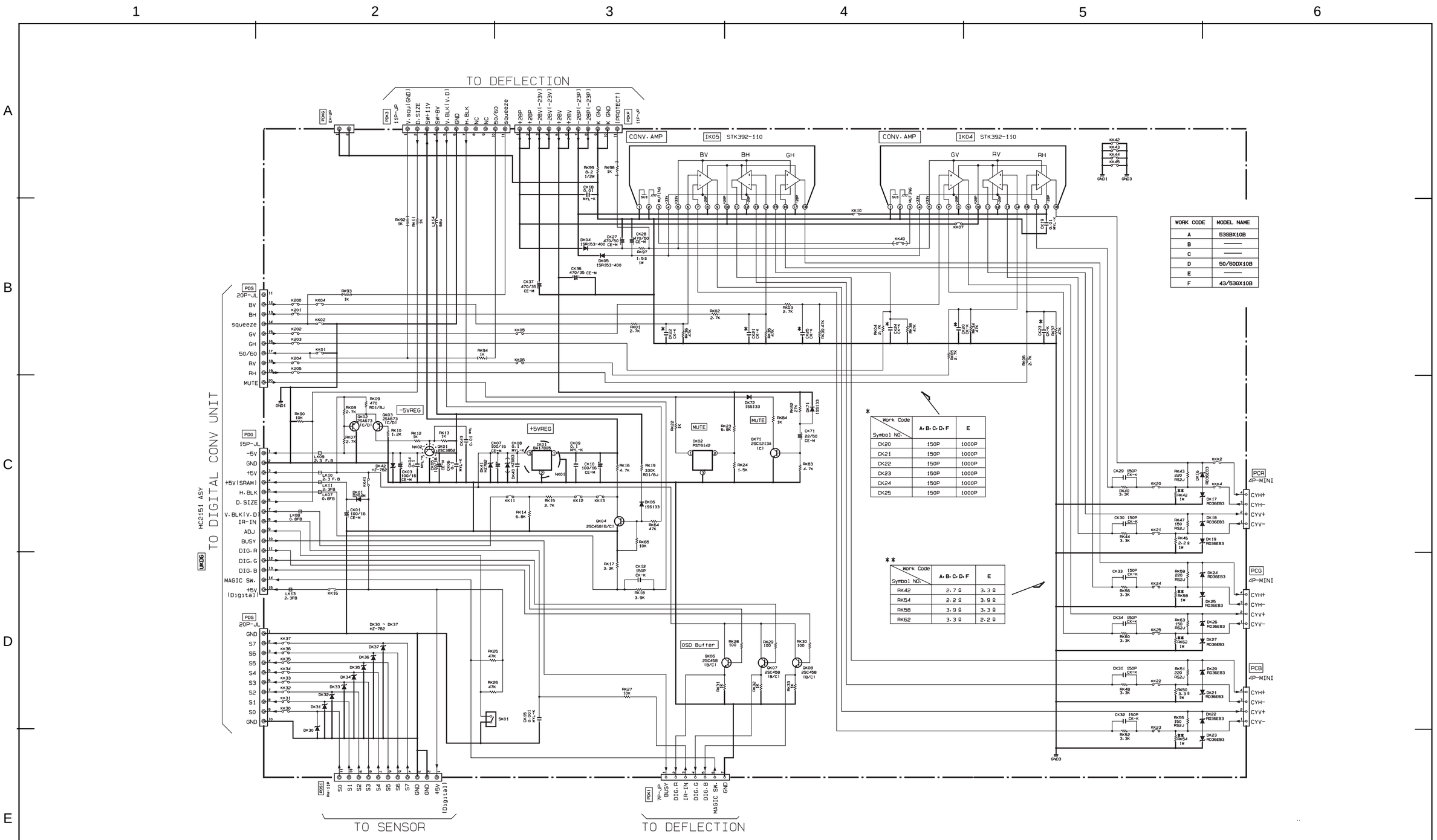
BASIC CIRCUIT DIAGRAM



WORK CODE	MODEL NAME
A	53SBX10B
B	——
C	——
D	50/60DX10B
E	——
F	43/53GX10B

*

Symbol NO. \ Work Code	A, B, C, D, F	E
CK20	150P	1000P
CK21	150P	1000P
CK22	150P	1000P
CK23	150P	1000P
CK24	150P	1000P
CK25	150P	1000P

**

Symbol NO. \ Work Code	A, B, C, D, F	E
RK42	2.7Ω	3.3Ω
RK54	2.2Ω	3.9Ω
RK58	3.9Ω	3.3Ω
RK62	3.3Ω	2.2Ω

- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

CONVERGENCE

HOME

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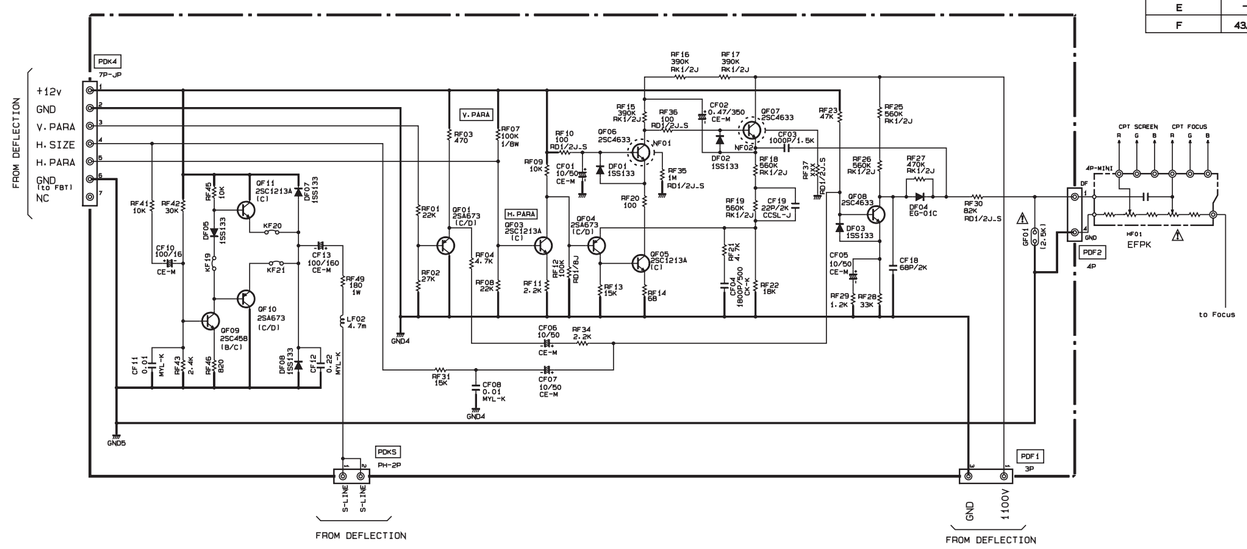
BASIC CIRCUIT DIAGRAM

WORK CODE	MODEL NAME
A	53SBX10B
B	———
C	———
D	50/60DX10B
E	———
F	43/53GX10B



- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

FOCUS

HOME

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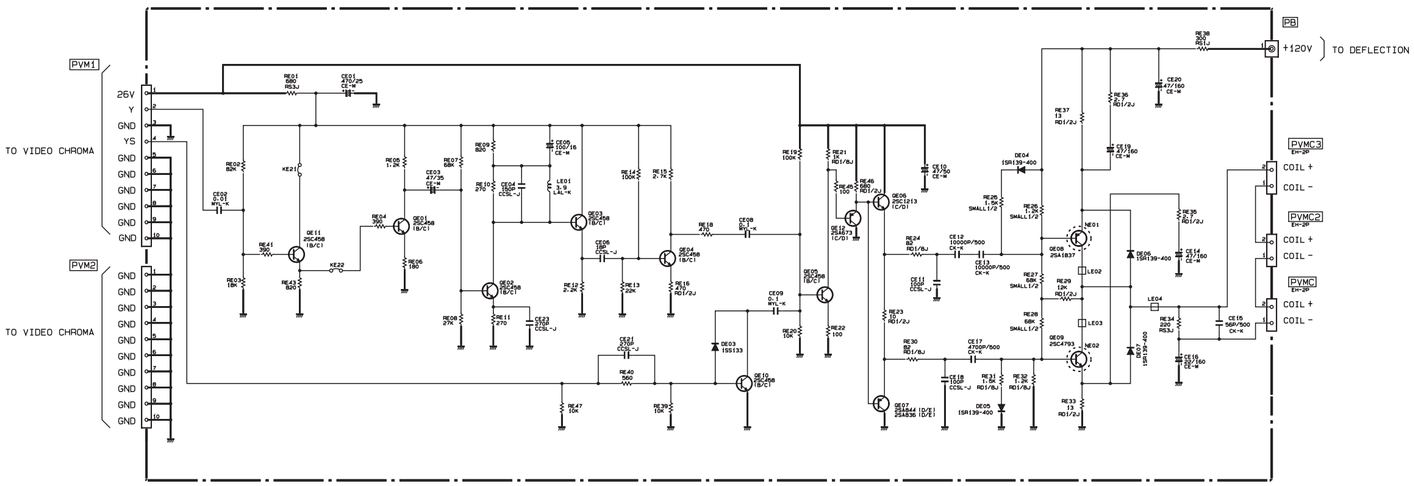
BASIC CIRCUIT DIAGRAM



WORK CODE	MODEL NAME
A	53SBX10B
B	———
C	———
D	50/60DX10B
E	———
F	43/53GX10B

- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

VM

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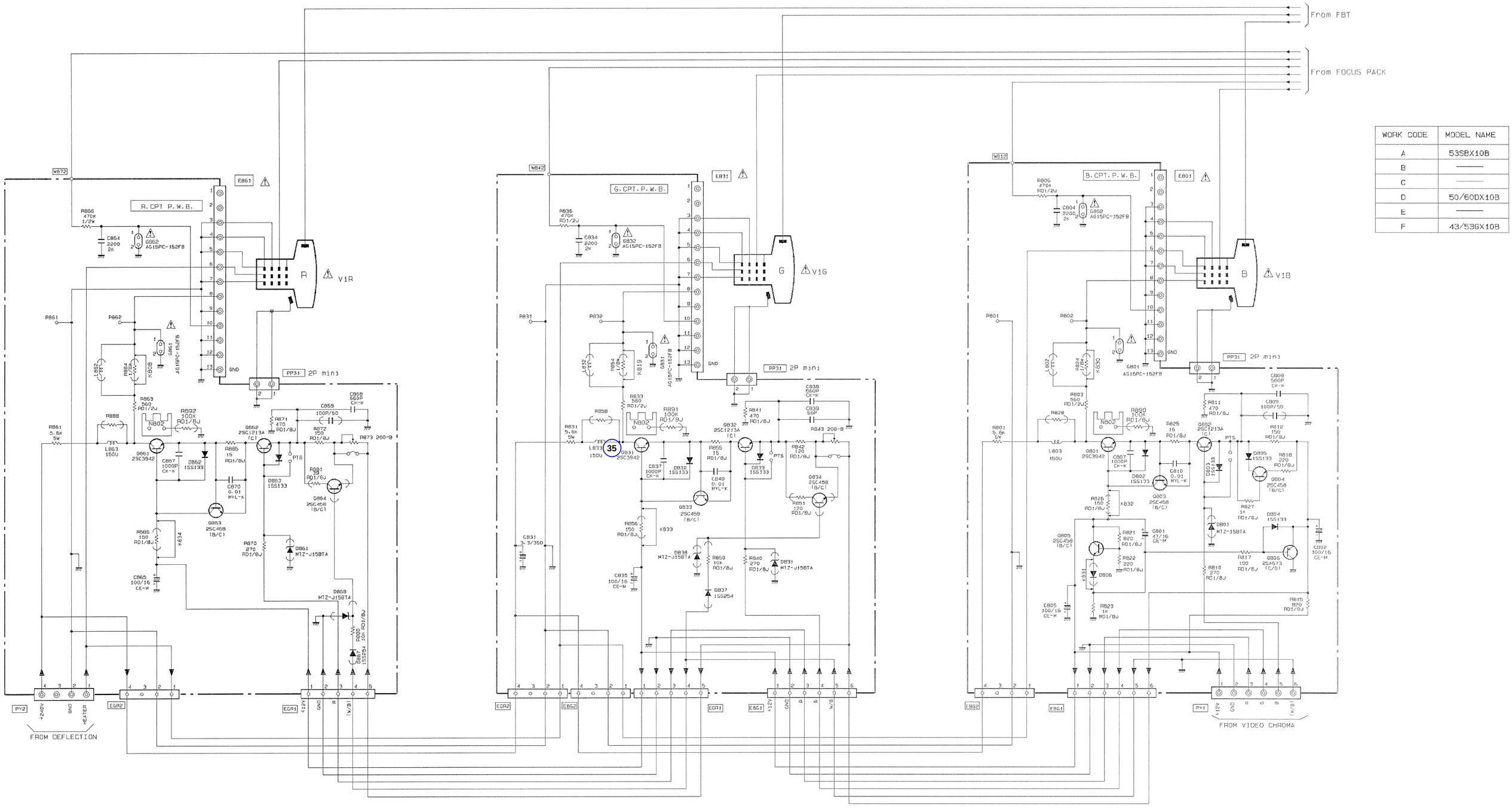
BASIC CIRCUIT DIAGRAM

CPT
HP1X CHASSIS

WORK CODE	MODEL NAME
A	53SBX10B
B	———
C	———
D	50/60DX10B
E	———
F	43/53GX10B

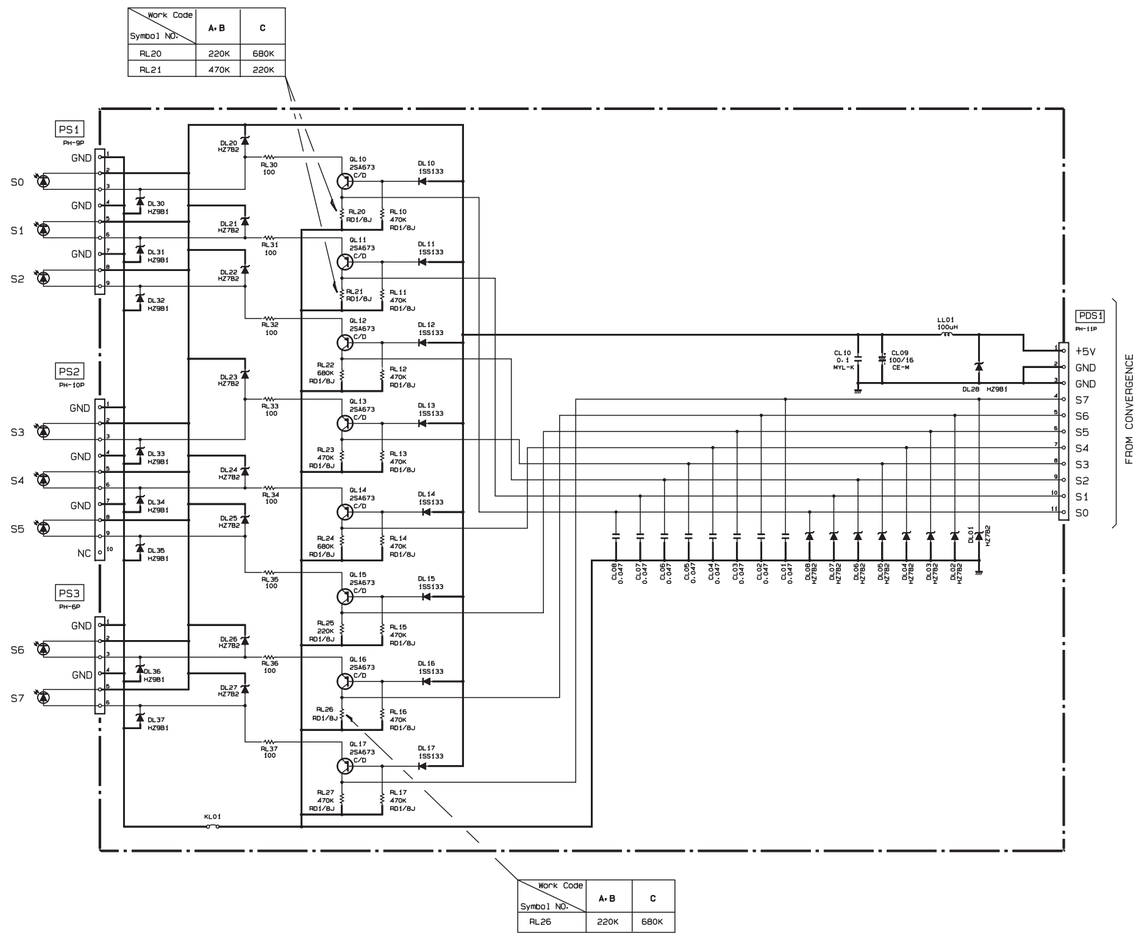


- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

PRODUCT SAFETY NOTE: Components marked with a ⚠ and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

BASIC CIRCUIT DIAGRAM

WORK CODE	MODEL NAME
A	53SBX10B
B	———
C	———
D	50/60DX10B
E	———
F	43/53GX10B



Work Code / Symbol NO.	A, B	C
RL26	220K	680K

- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

SENSOR

HOME

PRODUCT SAFETY NOTE: Components marked with a ⚠ and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

BASIC CIRCUIT DIAGRAM

WORK CODE	MODEL NAME
A	53SBX10B
B	——
C	——
D	50/60DX10B
E	——
F	43/53GX10B

SRS LOGIC

MODE	MODE1	MODE2
BYPASS(SRS OFF)	L	L/H
SRS STEREO	H	L
SRS MONAURAL	H	H

TruSurround/SRS LOGIC

MODE	MODE1	MODE2	SRS	BYPASS
BYPASS	L	L	L	H
TSY	L	H	L	L
SRS 3D-STEREO	H	L	H	L
TruSurround	H	H	L	L

FRONT AUDIO AMP

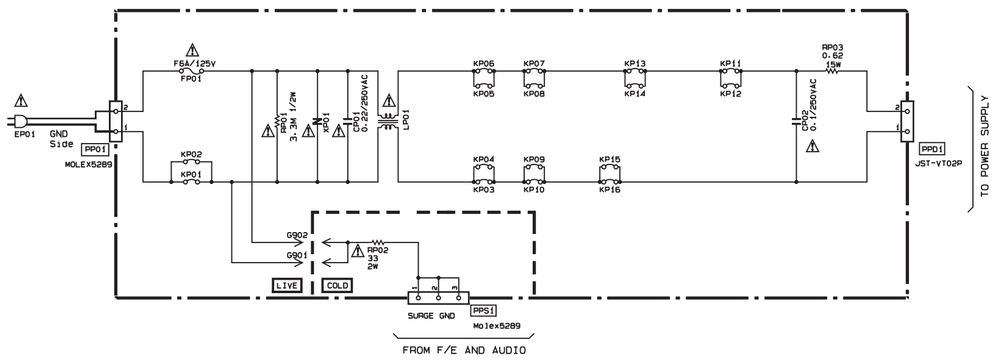
SRS

- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

PRODUCT SAFETY NOTE: Components marked with a ⚠ and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

BASIC CIRCUIT DIAGRAM

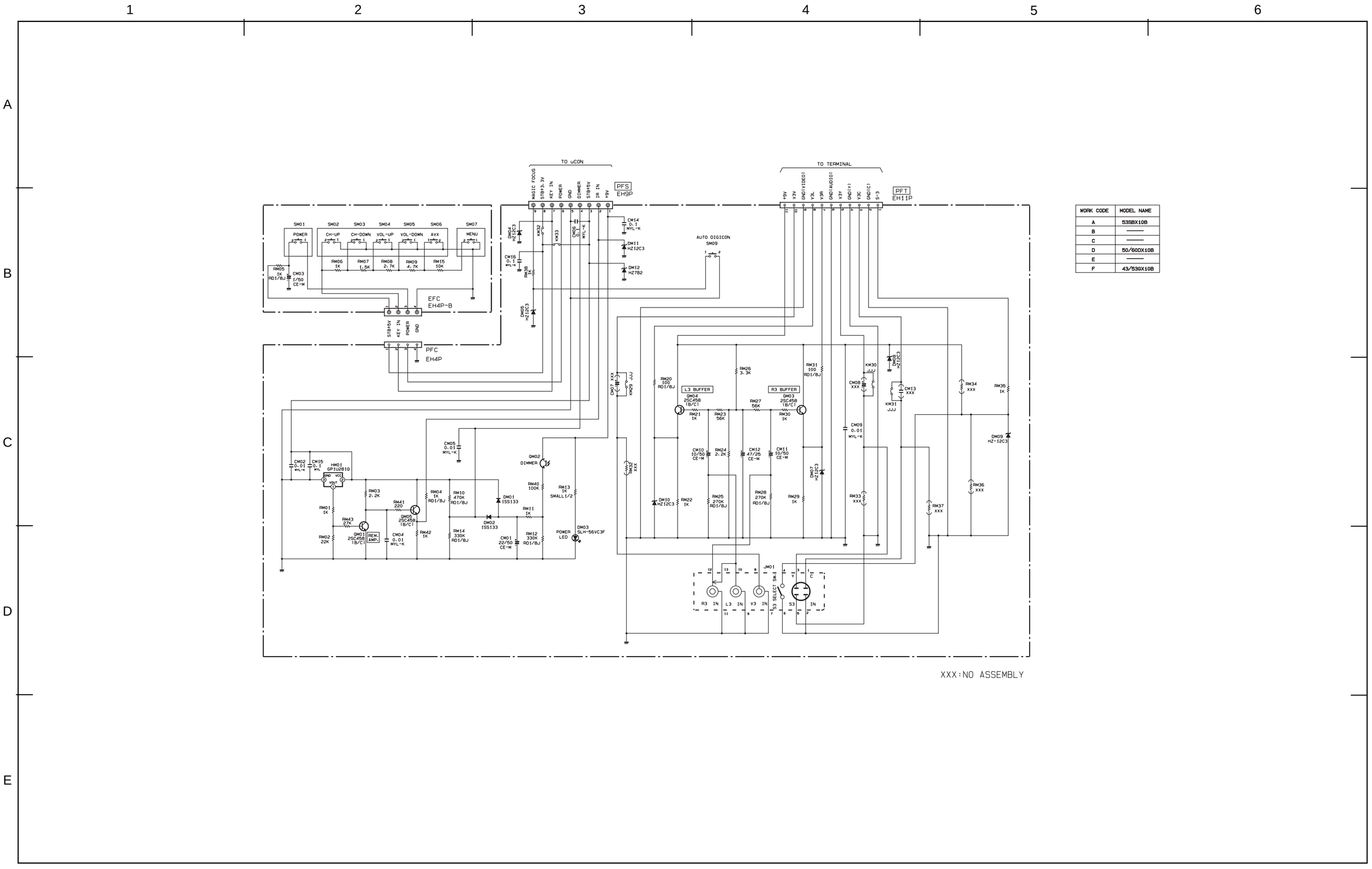
WORK CODE	MODEL NAME
A	53SBX10B
B	———
C	———
D	50/60DX10B
E	———
F	43/53GX10B



- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

PRODUCT SAFETY NOTE: Components marked with a ⚠ and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

BASIC CIRCUIT DIAGRAM



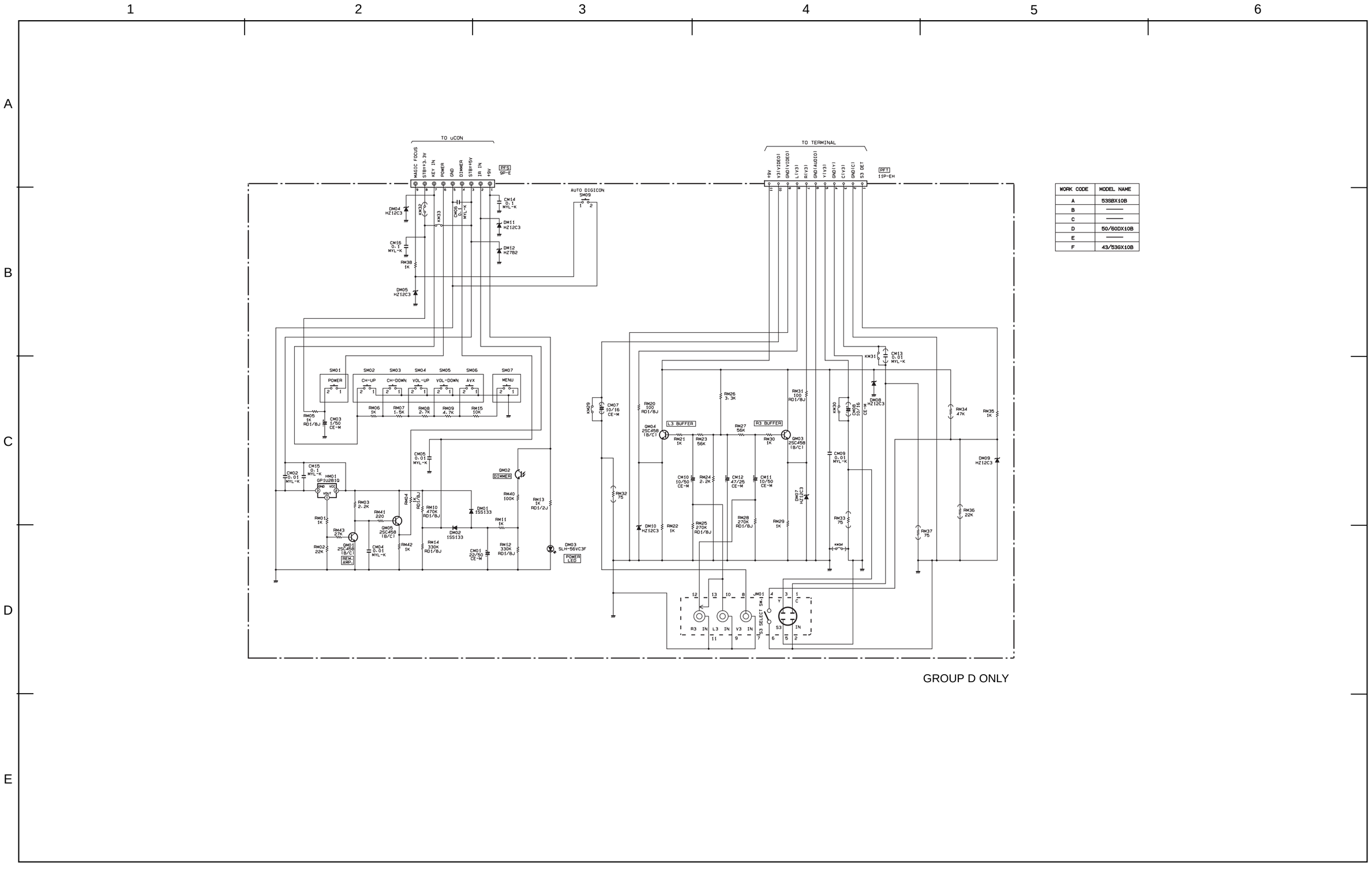
WORK CODE	MODEL NAME
A	53SBX10B
B	———
C	———
D	50/60DX10B
E	———
F	43/53GX10B

XXX:NO ASSEMBLY

- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

PRODUCT SAFETY NOTE: Components marked with a ⚠ and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

BASIC CIRCUIT DIAGRAM



WORK CODE	MODEL NAME
A	53SBX10B
B	——
C	——
D	50/60DX10B
E	——
F	43/53GX10B

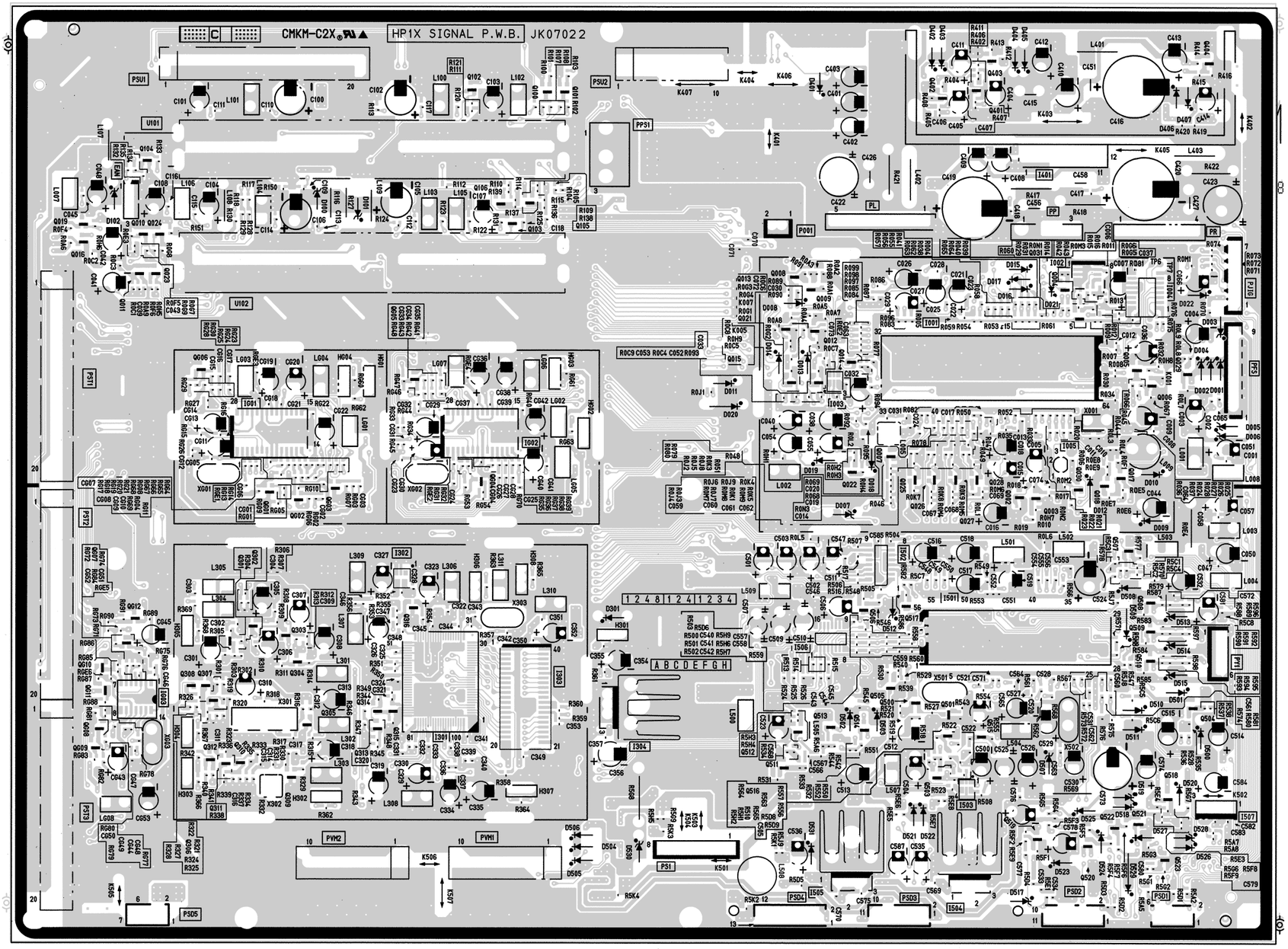
- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

CONTROL B

HOME

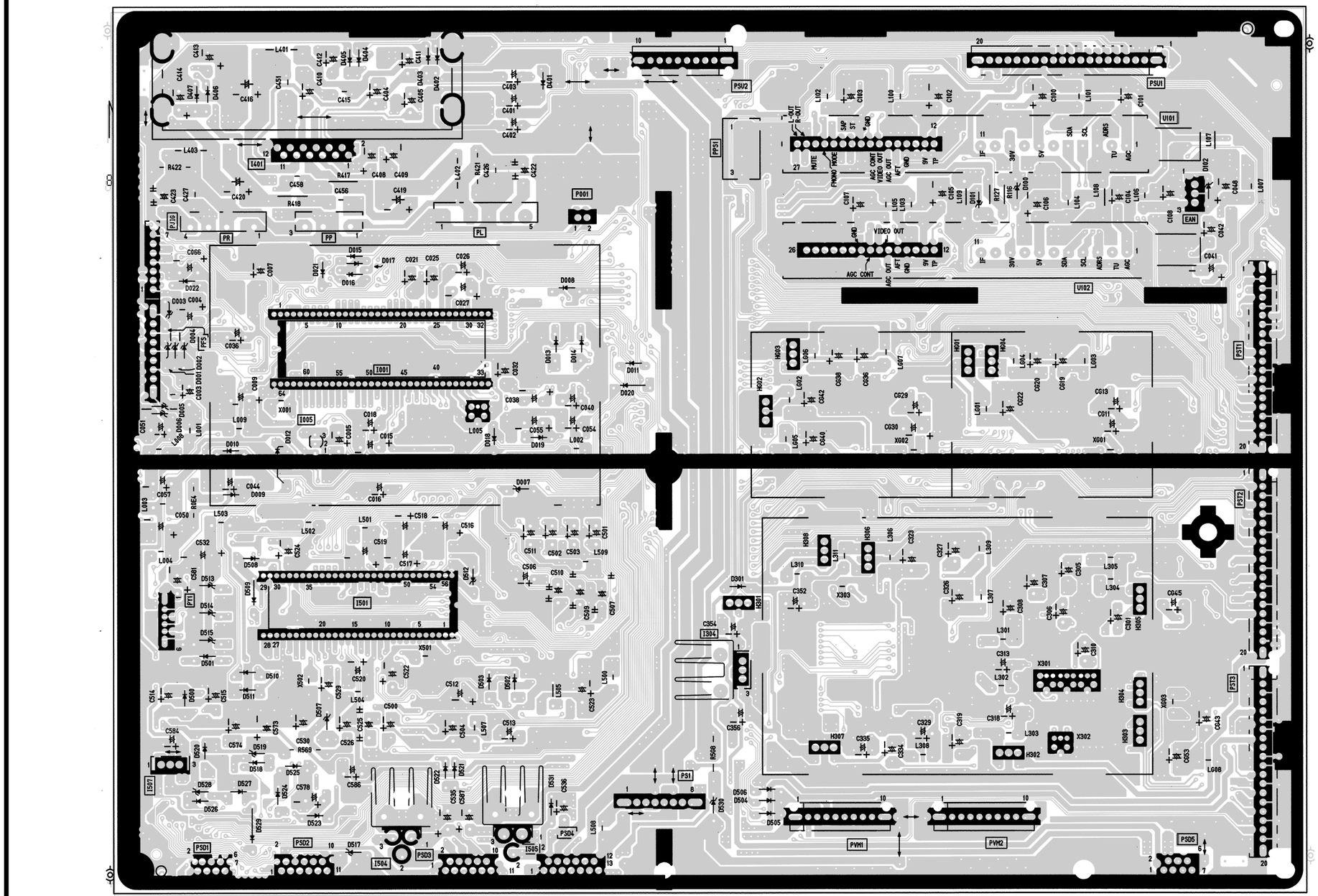
PRINTED CIRCUIT BOARD
COMPONENT SIDE

HP1X SIGNAL PWB



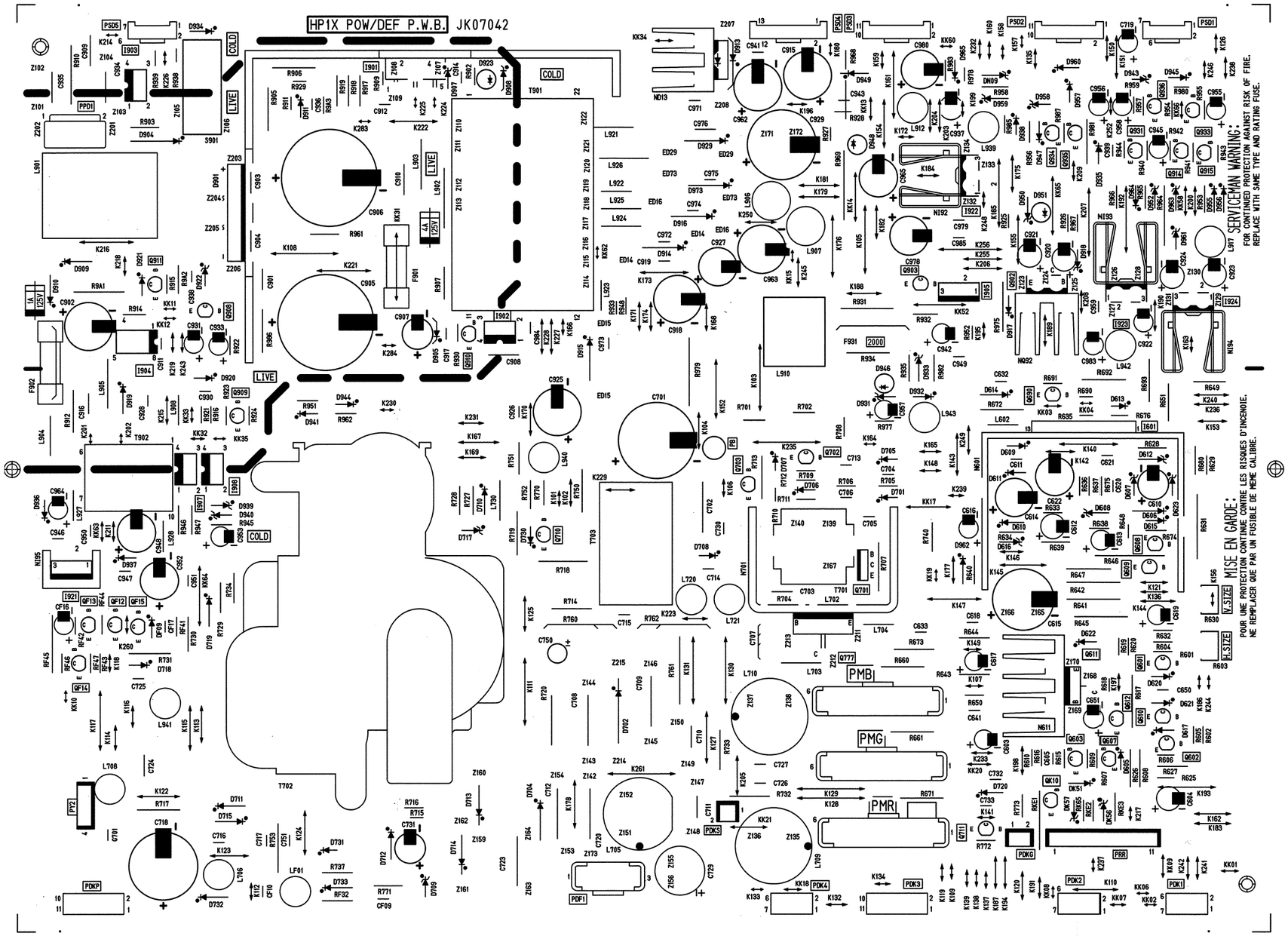
PRINTED CIRCUIT BOARD
PATTERN SIDE

HP1X SIGNAL PWB



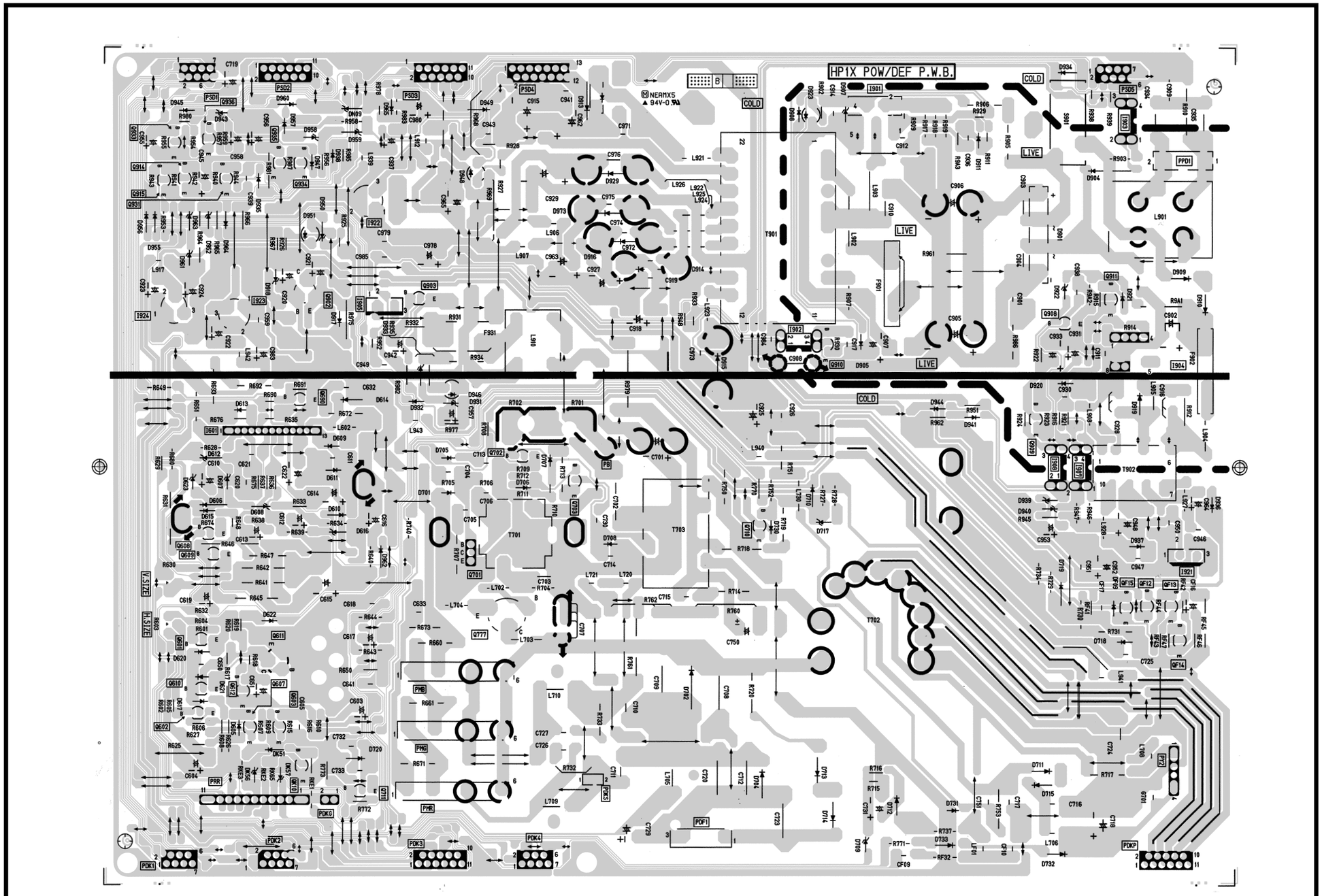
PRINTED CIRCUIT BOARD
COMPONENT SIDE

HP1X POWER/DEFLECTION PWB



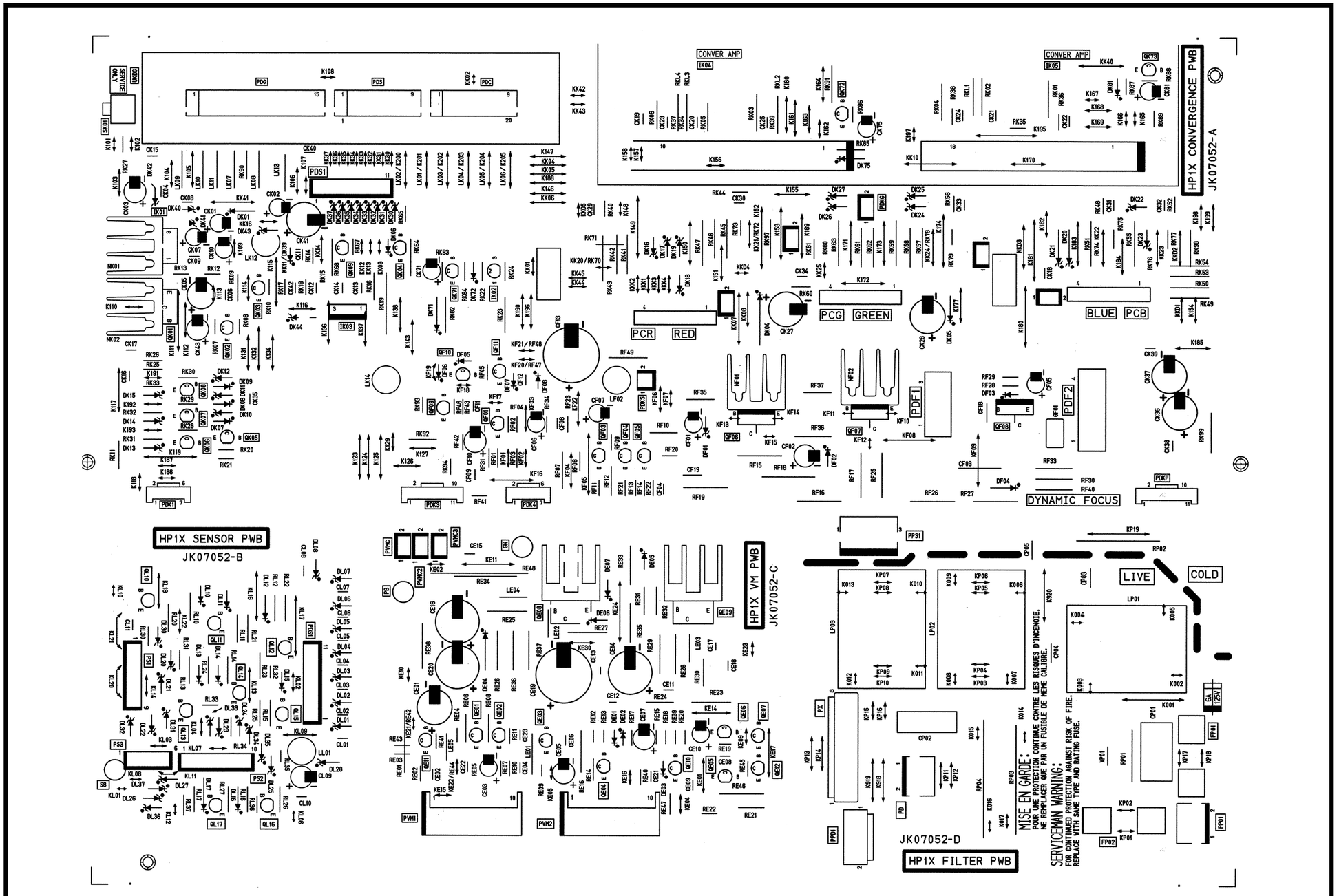
PRINTED CIRCUIT BOARD
PATTERN SIDE

HP1X POWER/DEFLECTION PWB



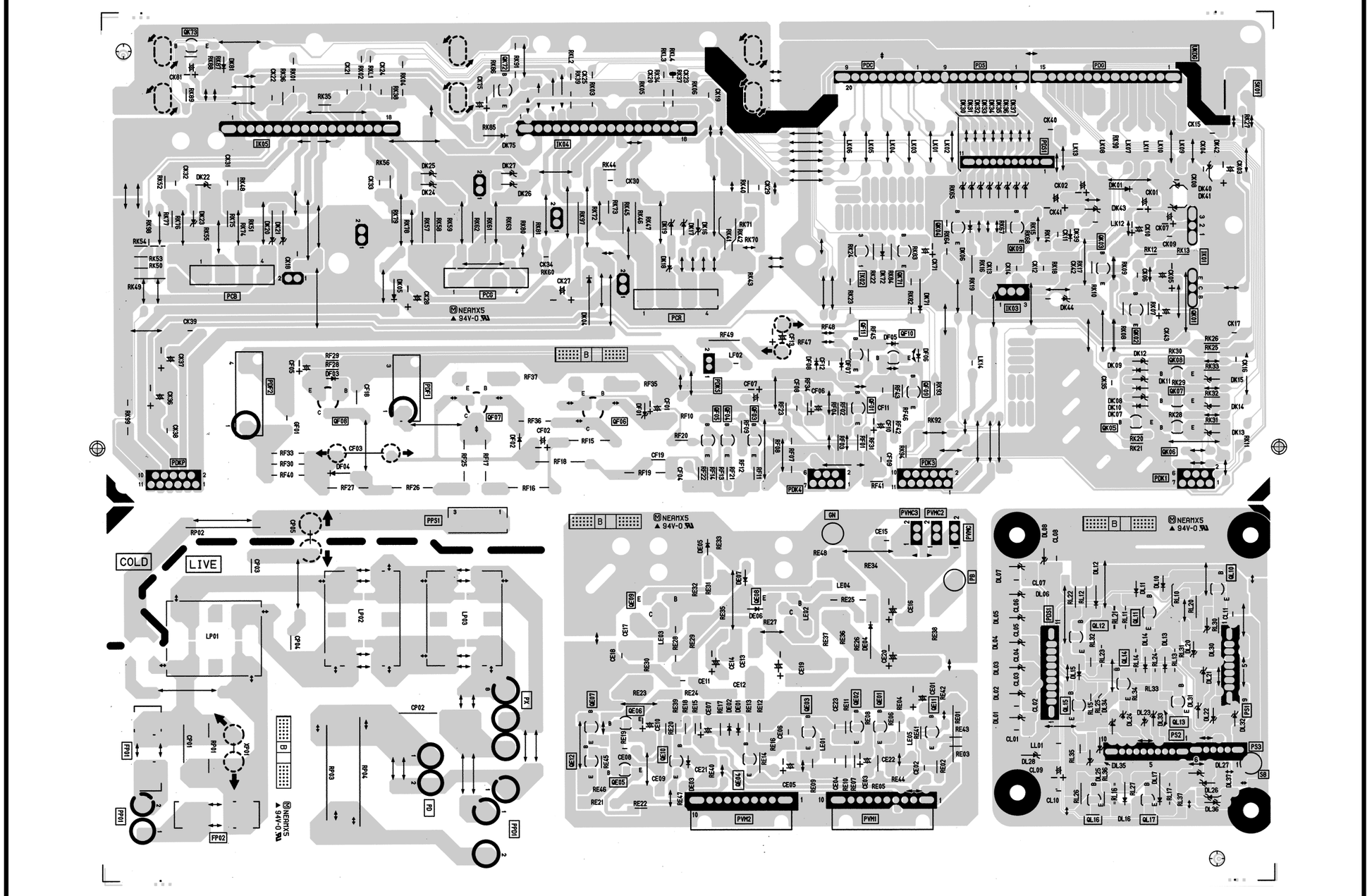
PRINTED CIRCUIT BOARD
COMPONENT SIDE

HP1X CONVERGENCE PWB



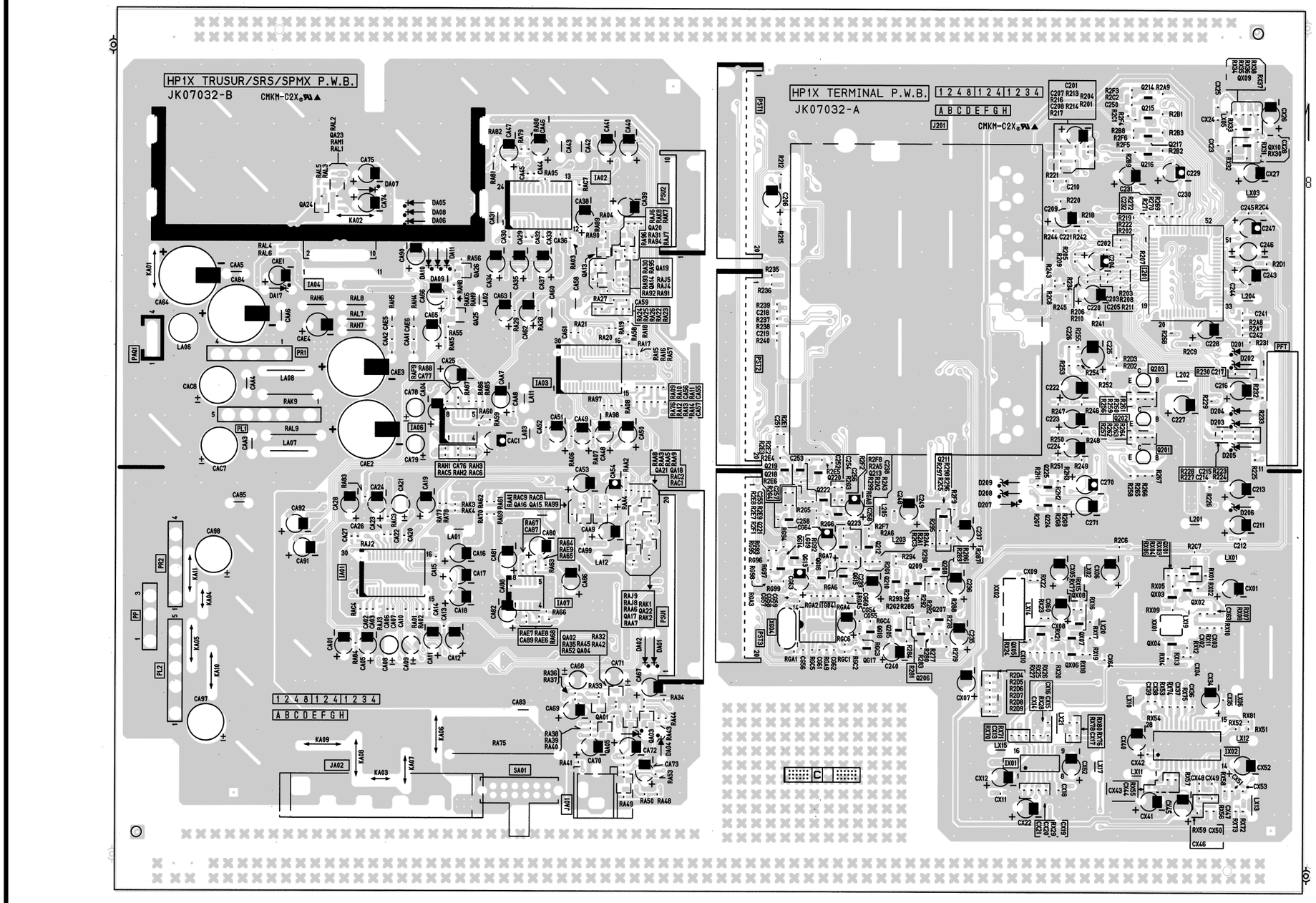
PRINTED CIRCUIT BOARD
PATTERN SIDE

HP1X CONVERGENCE PWB



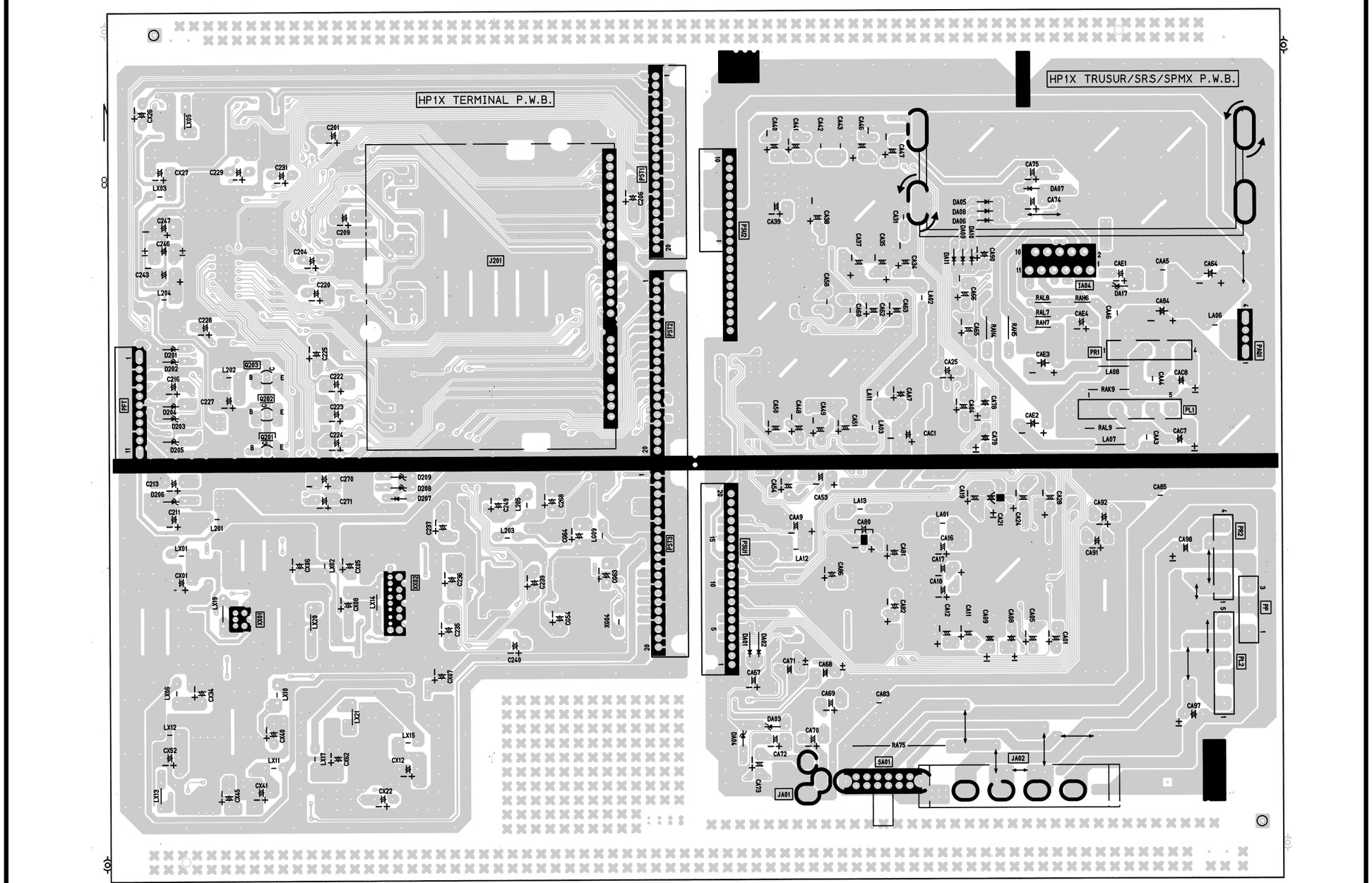
PRINTED CIRCUIT BOARD
COMPONENT SIDE

HP1X TERMINAL PWB / SRS/SPMX PWB



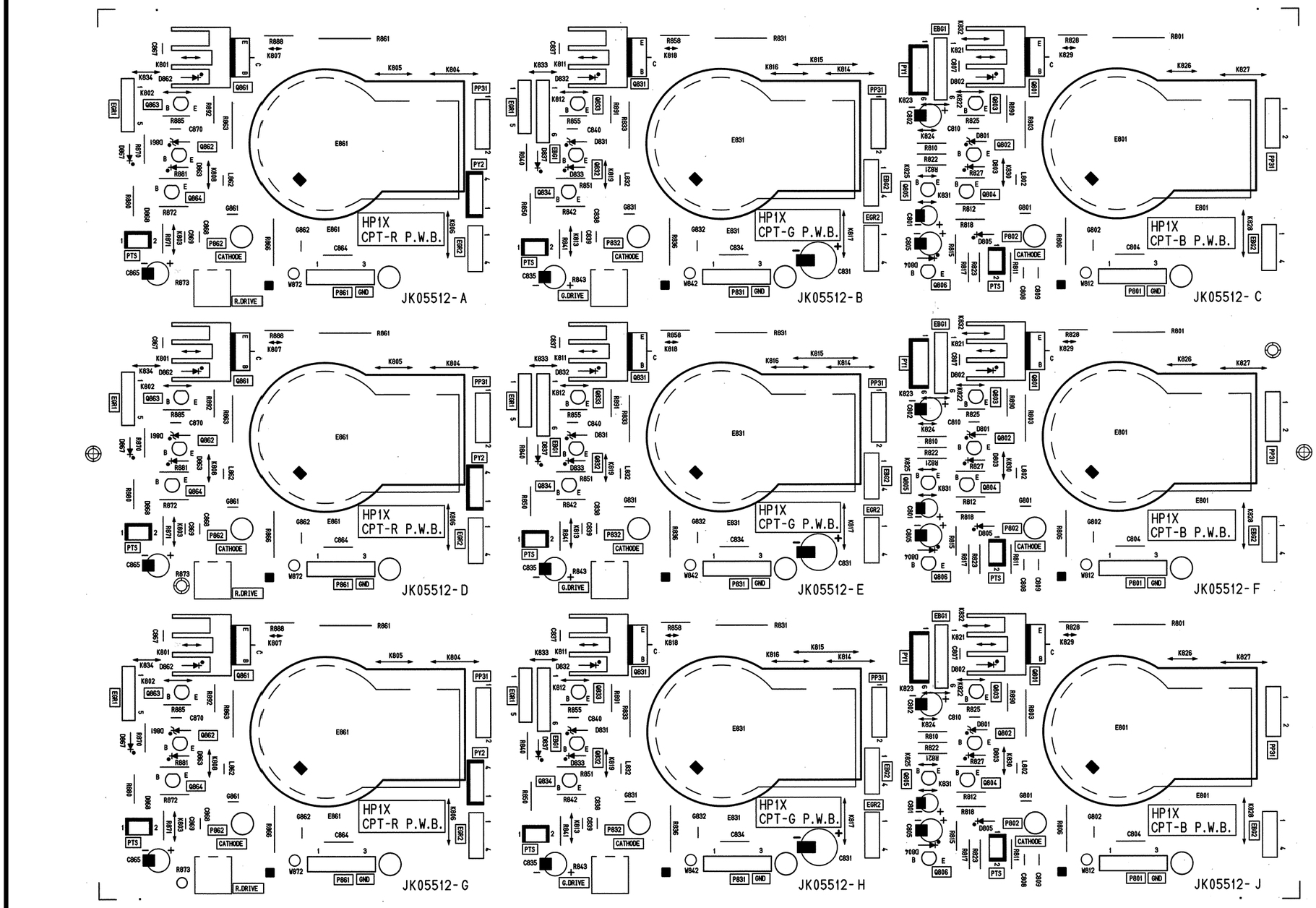
PRINTED CIRCUIT BOARD
PATTERN SIDE

HP1X TERMINAL PWB / SRS/SPMX PWB



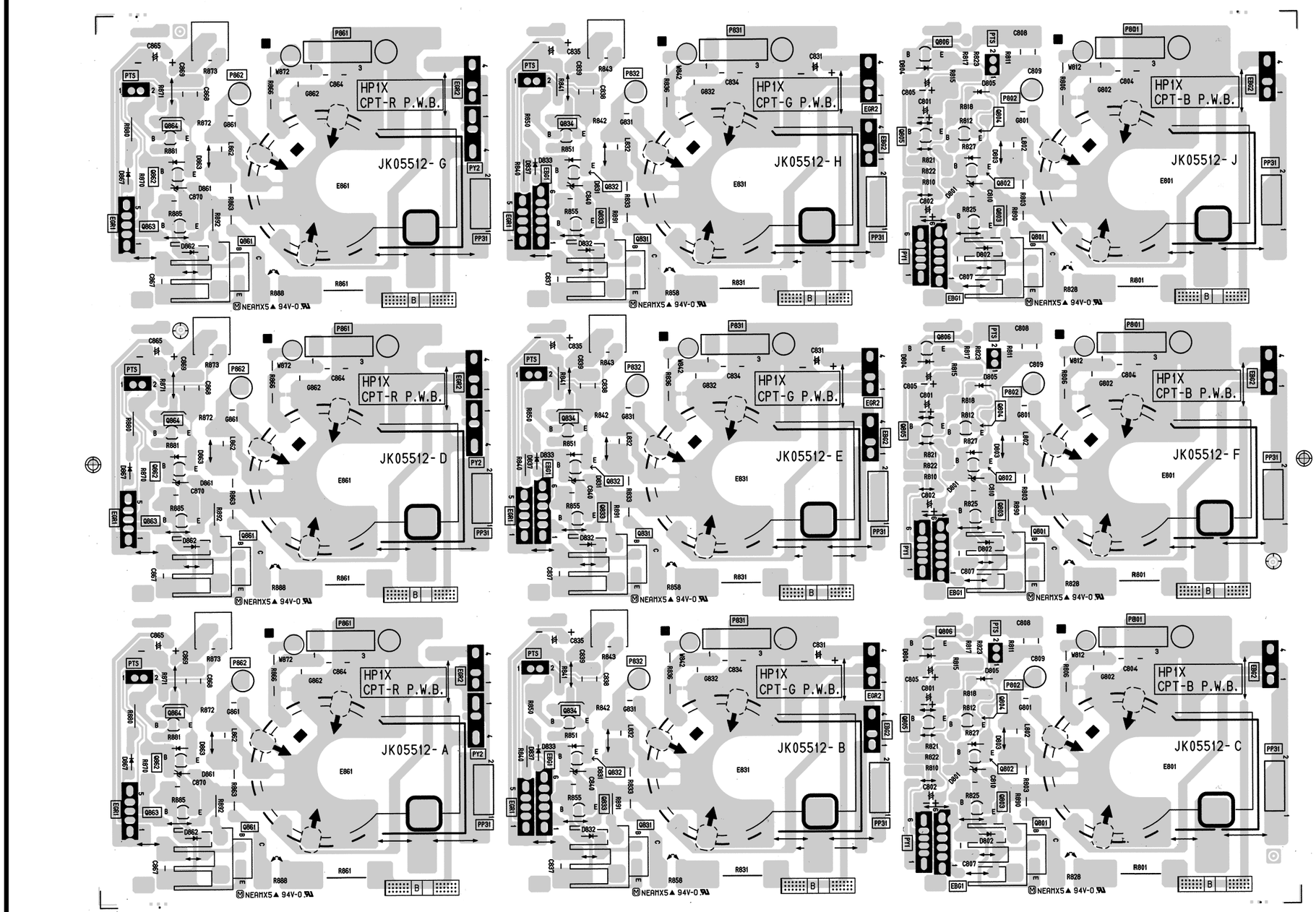
PRINTED CIRCUIT BOARD
COMPONENT SIDE

HP1X CPT PWB



PRINTED CIRCUIT BOARD
PATTERN SIDE

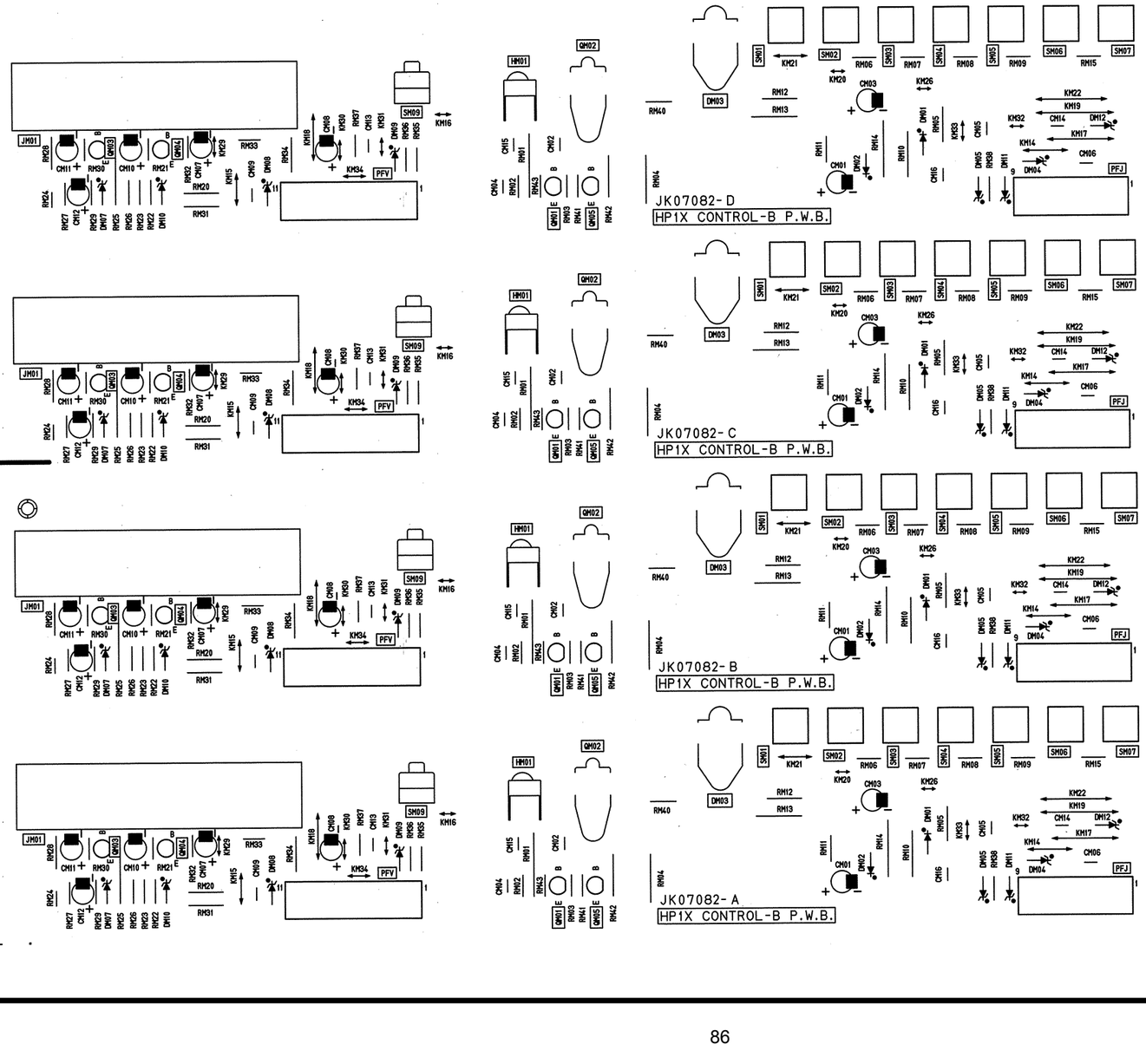
HP1X CPT PWB



PRINTED CIRCUIT BOARD
COMPONENT SIDE

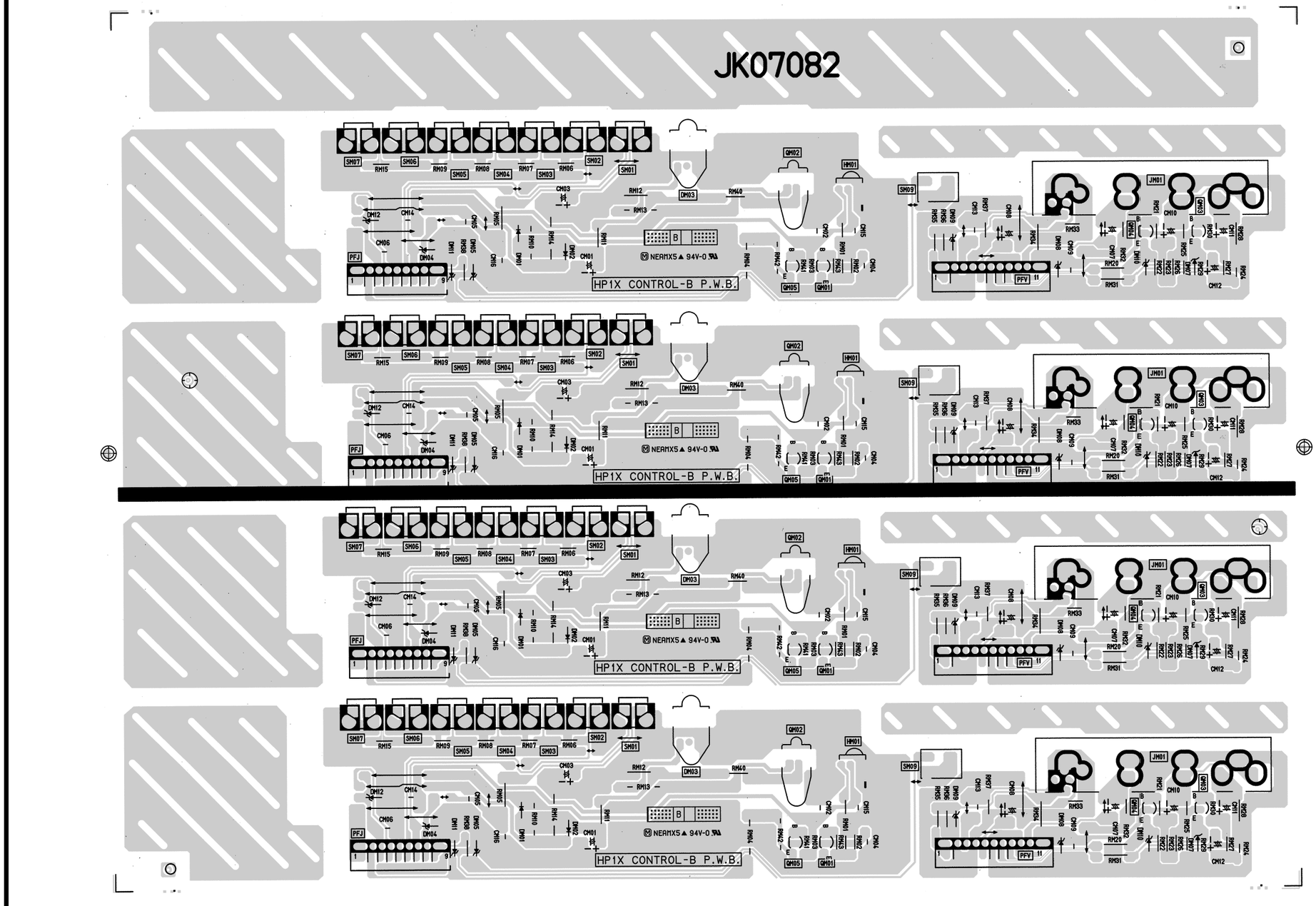
HP11 CONTROL PWB

JK07082



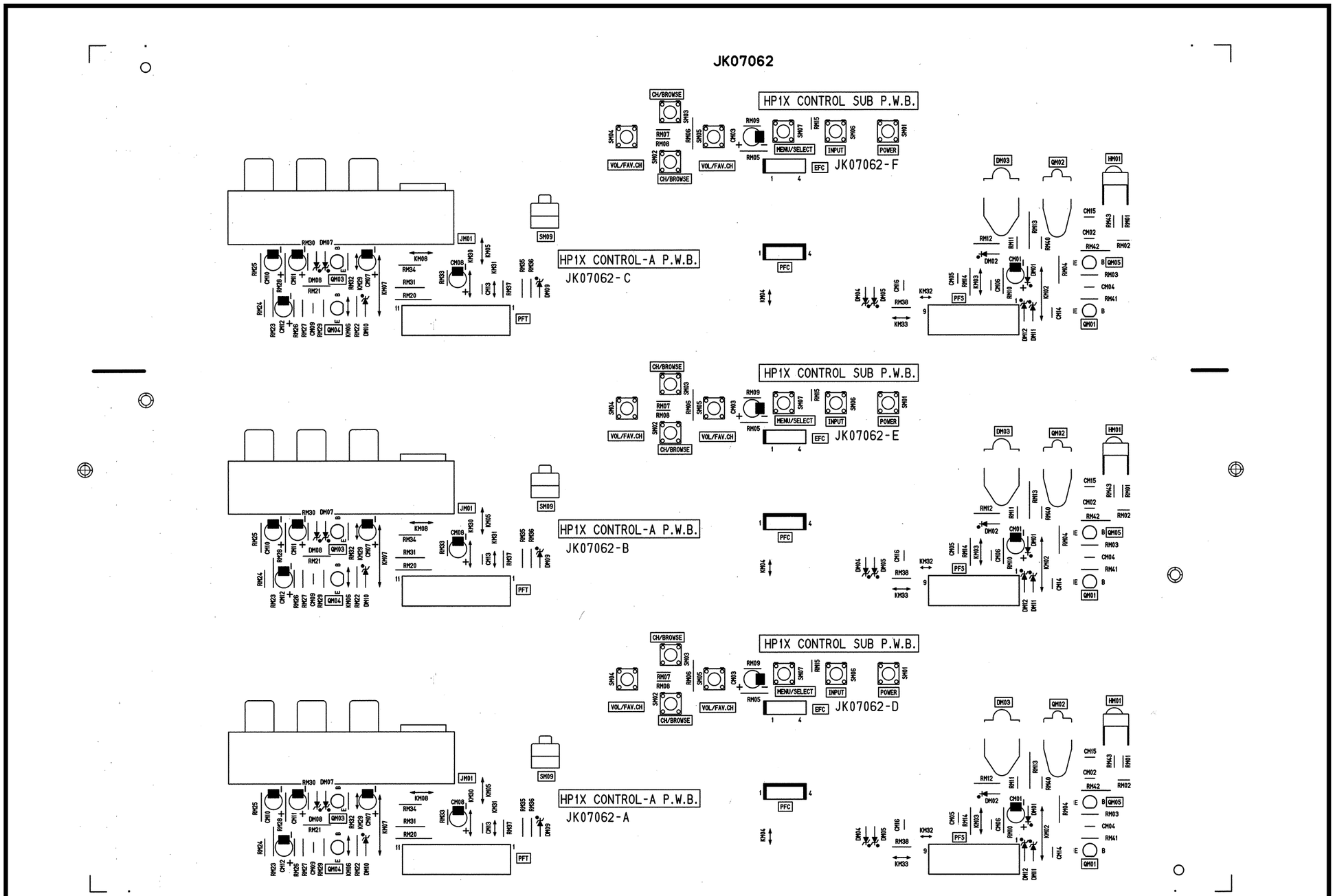
PRINTED CIRCUIT BOARD
PATTERN SIDE

HP11 CONTROL PWB



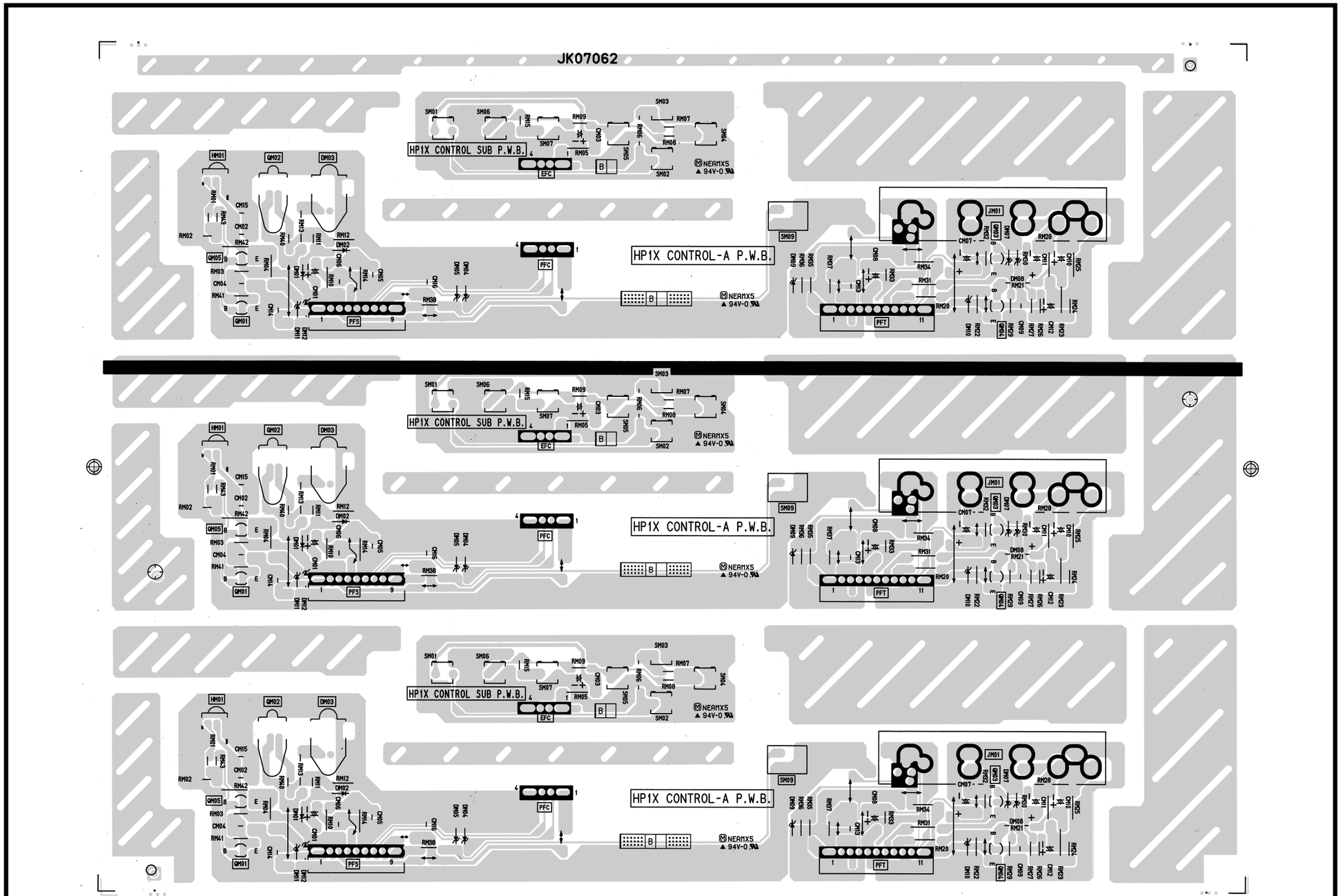
PRINTED CIRCUIT BOARD
COMPONENT SIDE

HP12 CONTROL PWB

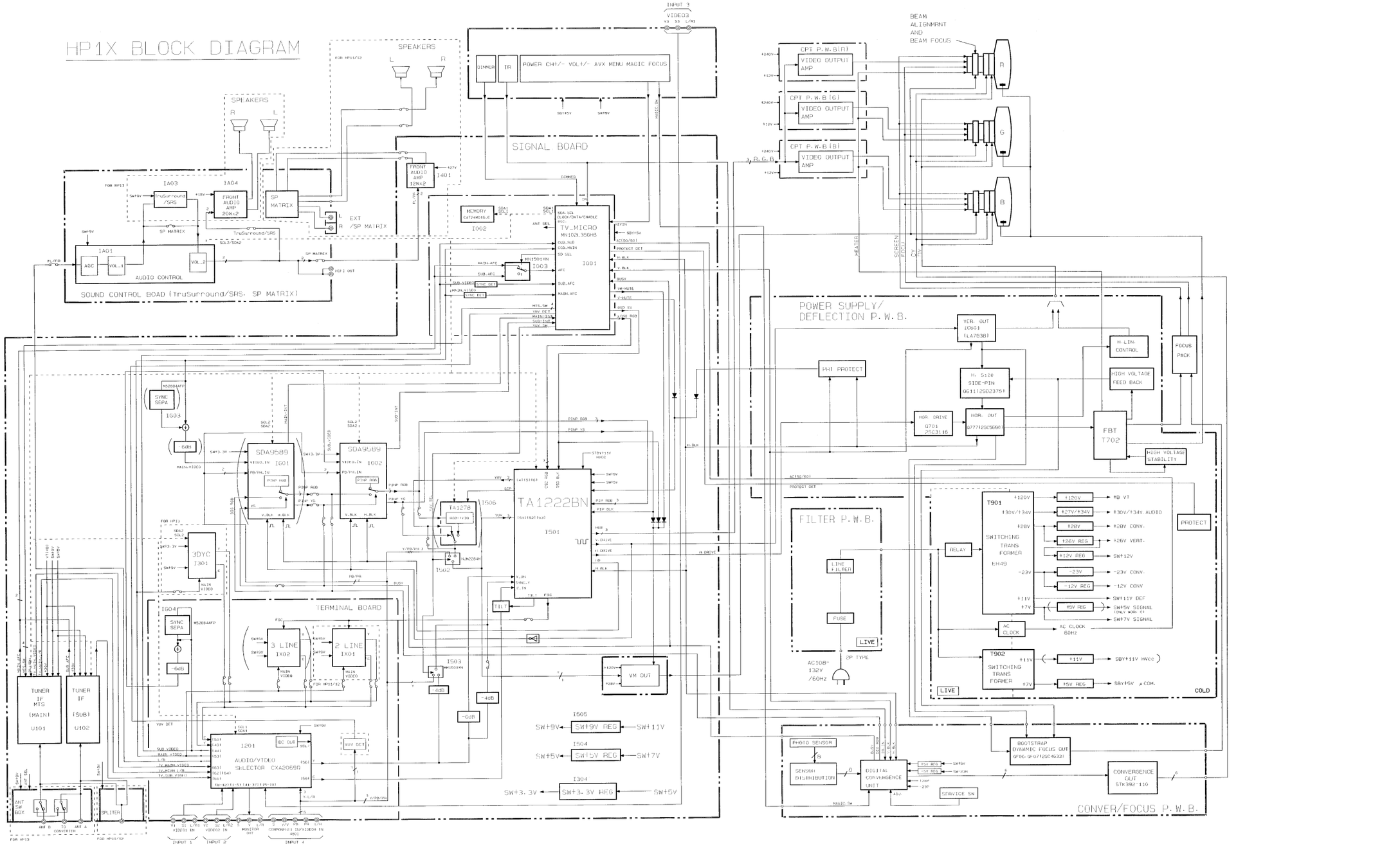


PRINTED CIRCUIT BOARD
PATTERN SIDE

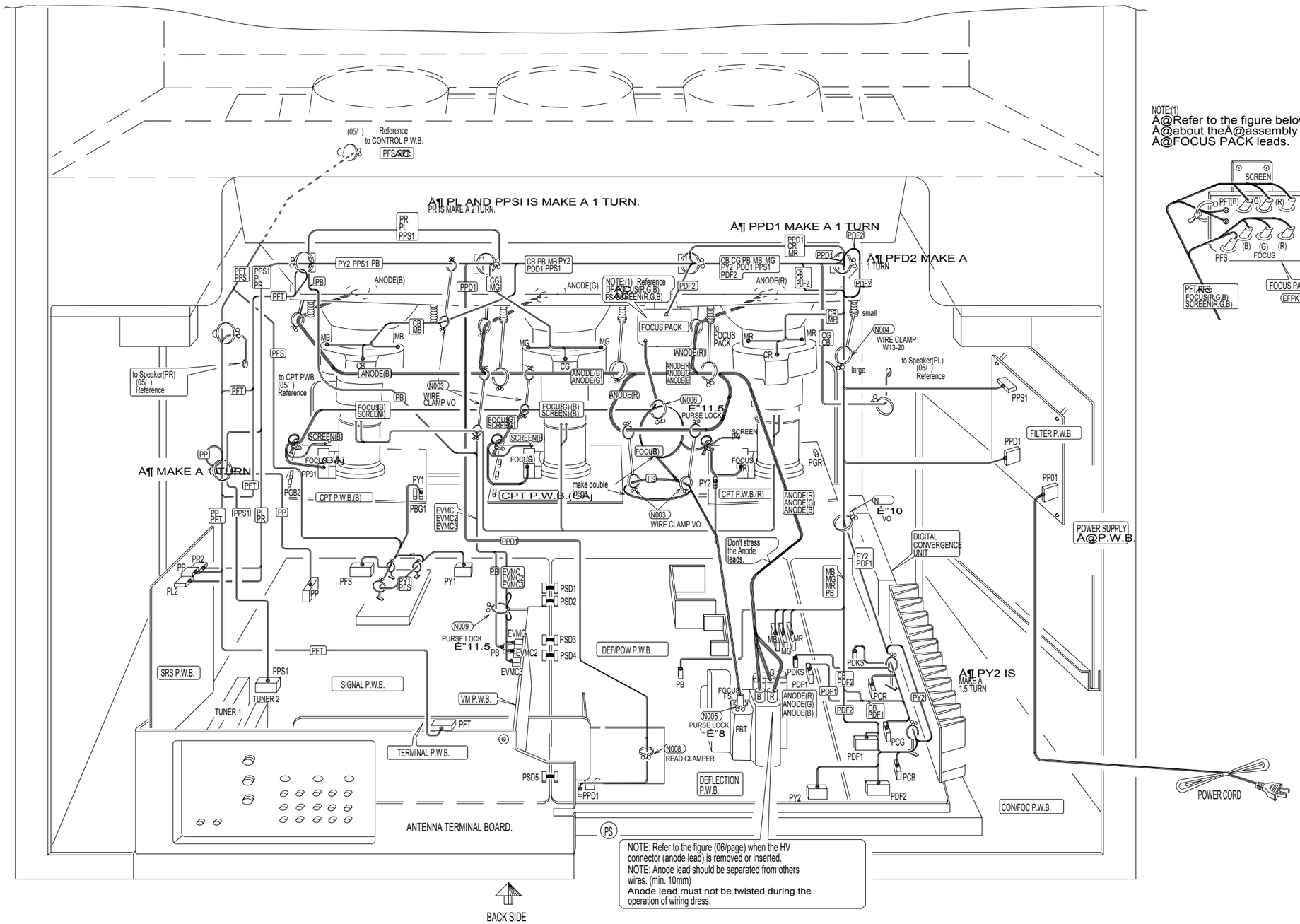
HP12 CONTROL PWB



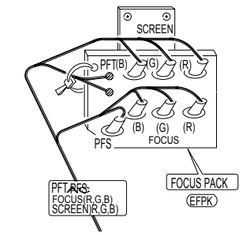
HP1X BLOCK DIAGRAM



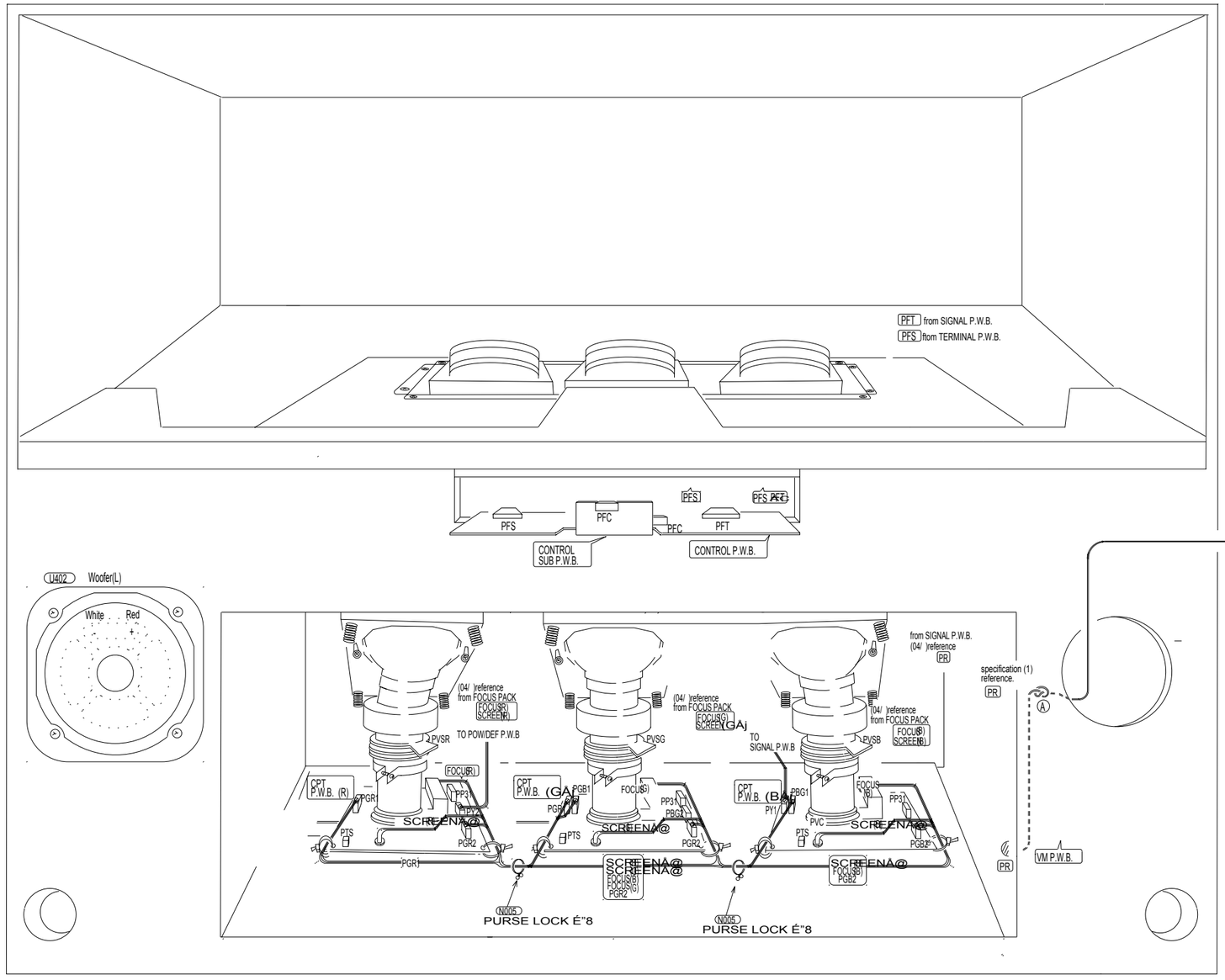
HP1X WIRING DRAWING



NOTE:(1)
A@Refer to the figure below A@about theA@assembly if A@FOCUS PACK leads.

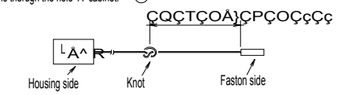


HP1X WIRING DRAWING



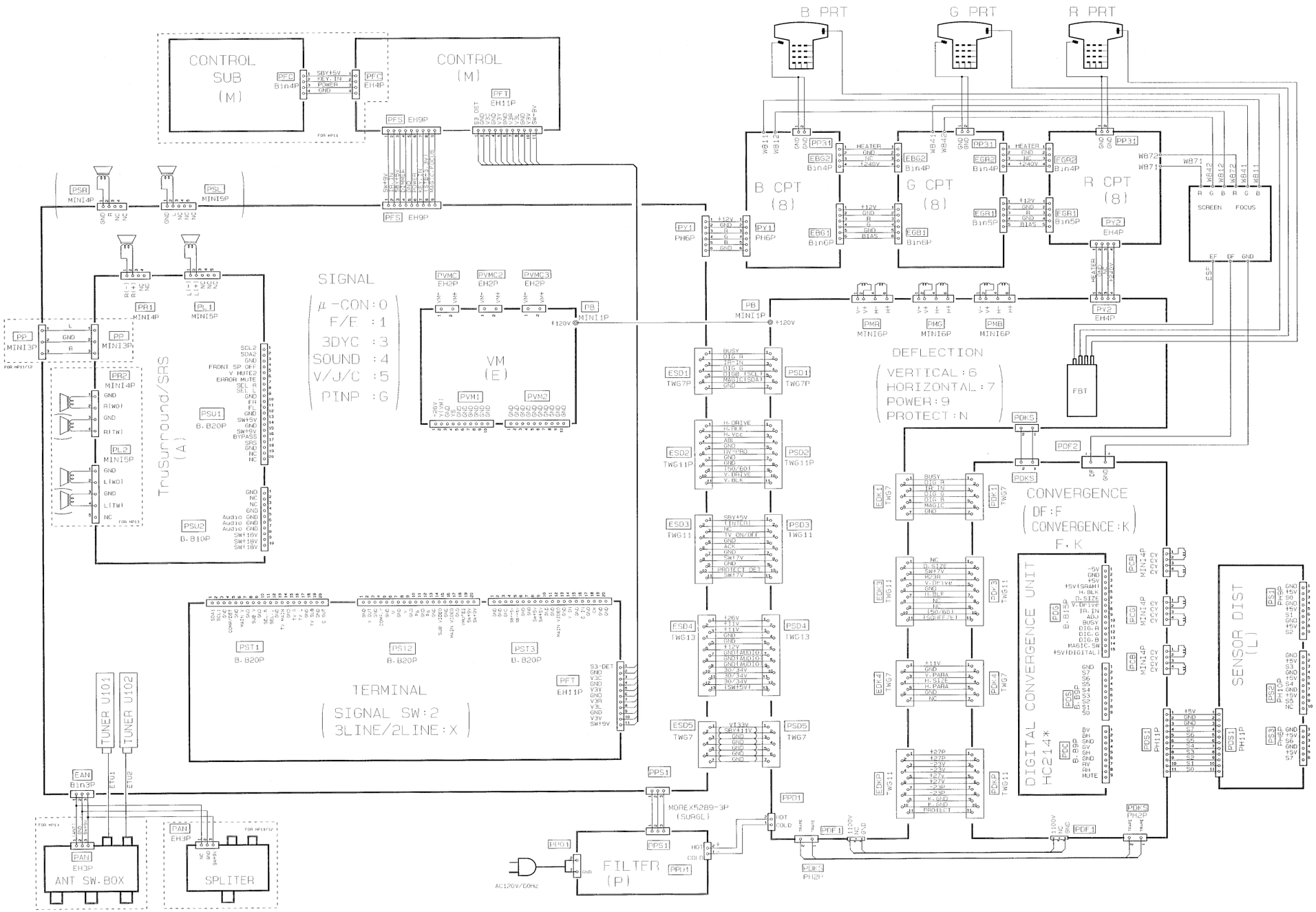
SPECIFICATION

(1) Make a knot as follow below Figure after wires is therugh the hole A cabinet.



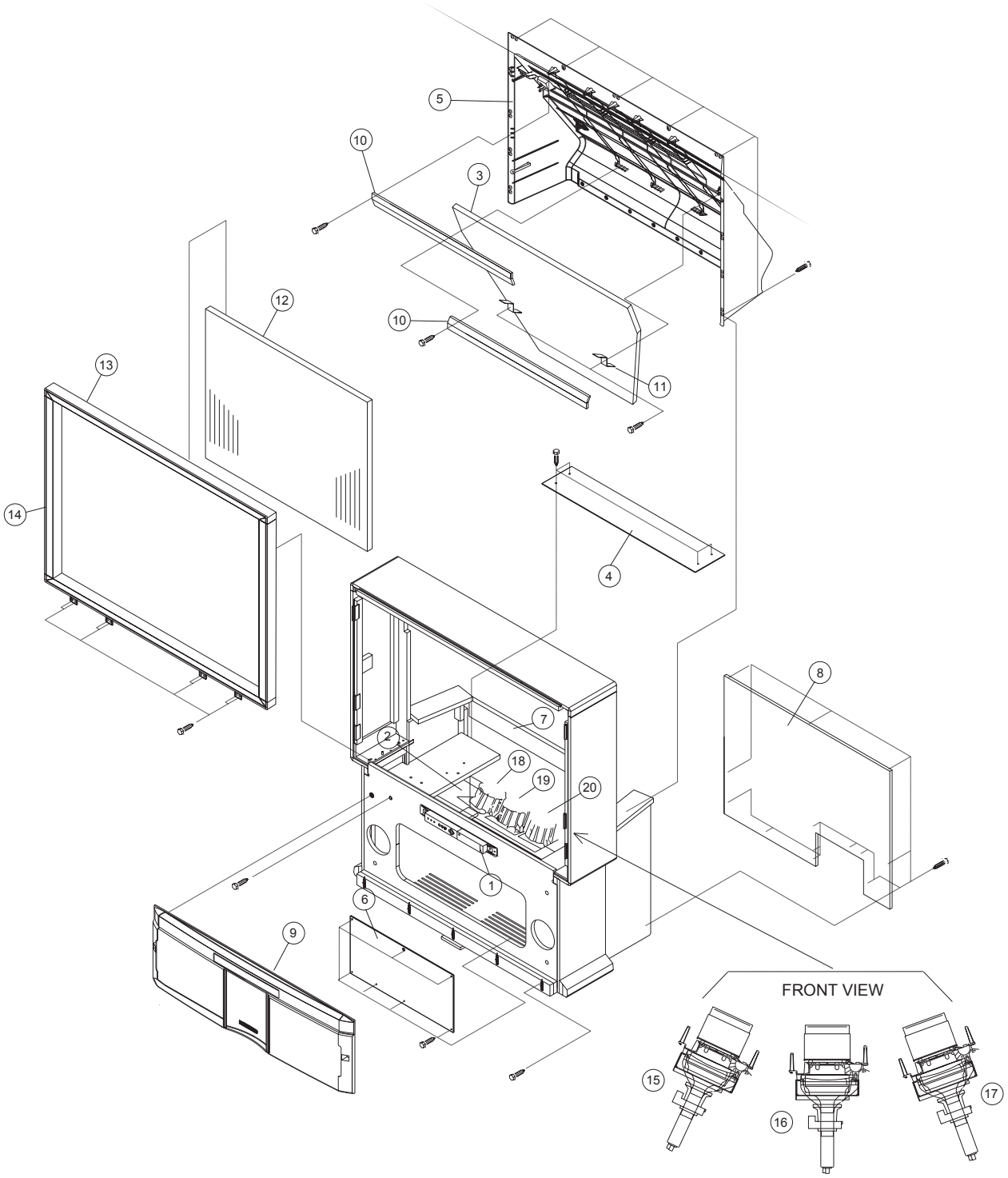
FRONT SIDE

HP1X CHASSIS WIRING DIAGRAM



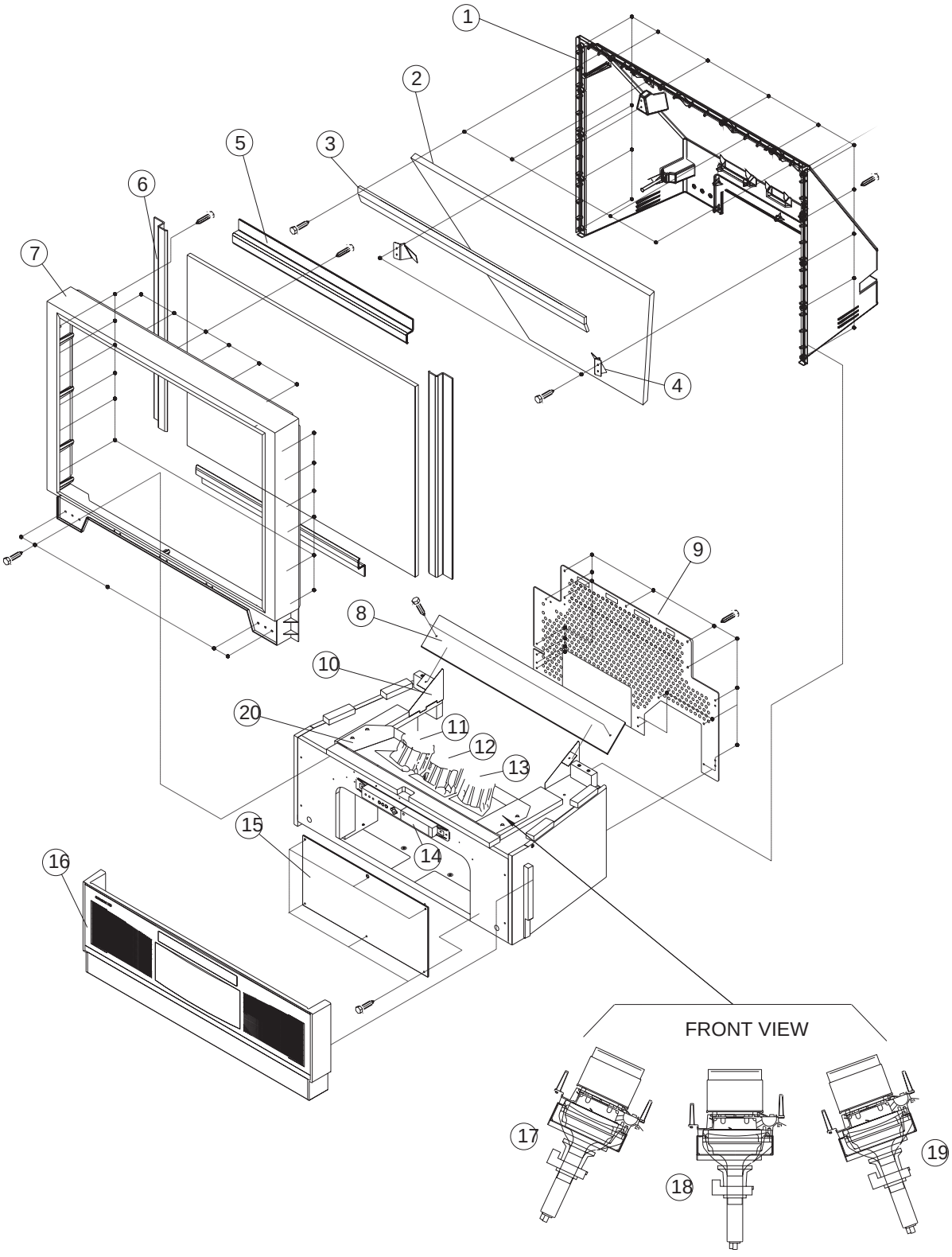
EXPLODED VIEW

50DX10B 60DX10B
50GX30B



NOTES: Some parts may appear different than those shown in the exploded view. When ordering, refer to the replacement parts list for the correct part number. The circled numbers correspond to the parts list shown on page 96.

EXPLODED VIEW
43GX30B



NOTES: Some parts may appear different than those shown in the exploded view. When ordering, refer to the replacement parts list for the correct part number. The circled numbers correspond to the parts list shown on page 96.

EXPLODED VIEW PARTS LIST

SYMBOL NO.	PART NO.	PART DESCRIPTION
		43GX10B EXPLODED VIEW PARTS LIST
1	QD08992	BACK COVER
2	KS02024	MIRROR
3	NA47451	H. MIRROR METAL
4	NA47441/2	CENTRAL METAL R/L
5	NA47171	H. SCREEN METAL
6	NA47181	V. SCREEN METAL
7	QD08982	FRAME
8	33010381	BARRIER BOARD
9	H512274	LOWER REAR BOARD
10	NA49721	BARRIER SUPPORT METAL
11	KQ00811	CPD38 LENS ASSY (R)
12	KQ00811	CPD38 LENS ASSY (G)
13	KQ00811	CPD38 LENS ASSY (B)
14	PH08416	CONTROL PANEL
15	55010227	FRONT DOOR
16	PH08304	43GX SPEAKER GRILLE
17	UE07781	CPD-LTG ASSY (R)
18	UE07782	CPD-LTG ASSY (G)
19	UE07783	CPD-LTG ASSY (B)
20	NA48901	43" LENS CRT METAL

SYMBOL NO.	PART NO.	PART DESCRIPTION
		50DX10B EXPLODED VIEW PARTS LIST
1	PH02582	CONTROL PANEL
2	NA11681	MIRROR METAL
3	KS00169	MIRROR
4	N/A	BARRIER BOARD
5	QD03843	BACK COVER
6	55020072	FRONT DOOR
7	33200072	BACK CENTER BAR
8	H512281	LOWER REAR BOARD
9	32110082	SPEAKER GRILLE
10	NJ04211	LONG GRIP
11	NJ04231/2	SIDE GRIP
12	KR01221	SCREEN ASSY
13	H311818	TOP FRAME
14	PH08451	VERTICAL FRAME
15	**UE08874**	D78-LTG LENS ASSY (R)
16	**UE08875**	D78-LTG LENS ASSY (G)
17	**UE08876**	D78-LTG LENS ASSY (B)
18	KQ00881	CPC-1 LENS (R)
19	KQ00881	CPC-1 LENS (G)
20	KQ00881	CPC-1 LENS (B)

SYMBOL NO.	PART NO.	PART DESCRIPTION
		50GX30B EXPLODED VIEW PARTS LIST
1	PH09654	CONTROL PANEL
2	NA11681	CRT METAL
3	KS00169	MIRROR
4	N/A	BARRIER BOARD
5	QD03843	BACK COVER
6	55010199	FRONT DOOR
7	33200072	BACK CENTER BAR
8	H512281	LOWER REAR BOARD
9	32110081	SPEAKER GRILLE
10	NJ04211	LONG GRIP
11	NJ04233/4	SIDE GRIP
12	KR00276	SCREEN ASSY
13	H311761	TOP FRAME
14	QD08752	VERTICAL FRAME
15	UE08954	D78-LTG LENS ASSY (R)
16	UE08955	D78-LTG LENS ASSY (G)
17	UE08956	D78-LTG LENS ASSY (B)
18	KQ00113K	CPC-1 LENS (R)
19	KQ00112K	CPC-1 LENS (G)
20	KQ00111K	CPC-1 LENS (B)

SYMBOL NO.	PART NO.	PART DESCRIPTION
		60DX10B EXPLODED VIEW PARTS LIST
1	PH02582	CONTROL PANEL
2	NA11681	CRT METAL
3	KS00167	MIRROR
4	N/A	BARRIER BOARD
5	QD04113	BACK COVER
6	55010245	FRONT DOOR
7	33200073	BACK CENTER BAR
8	H512282	LOWER REAR BOARD
9	32110073	SPEAKER GRILLE
10	NJ04211	LONG GRIP
11	NJ04231/2	SIDE GRIP
12	KR01223	SCREEN ASSY
13	H311817	TOP FRAME
14	PH08452	VERTICAL FRAME
15	UE08871	D78-LTG LENS ASSY (R)
16	UE08872	D78-LTG LENS ASSY (G)
17	UE08873	D78-LTG LENS ASSY (B)
18	KQ00881	CPC-1 LENS (R)
19	KQ00881	CPC-1 LENS (G)
20	KQ00881	CPC-1 LENS (B)

REPLACEMENT PARTS LIST

PRODUCT SERVICE NOTE: Components marked with a ⚠ have special characteristics important to safety. Before replacing any of these components, read carefully, the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

ABBREVIATIONS

Capacitors:
- AL: Aluminum Electrolytic
- CD: Ceramic Disc
- EL: Electrolitic
- PF: Polyester Film
- PP: Polypropylene
- PL: Plastic
- TA: Tantalum
- PR: Paper
- TM: Trimmer
- MC: Mylar

Resistors:
- CF: Carbon Film
- CC: Carbon Composition
- MF: Metal Oxide
- VR: Variable Resistor
- WW: Wire Wound
- FR: Fuse Resistor
- MG: Metal Grazed

Semiconductors:
- TR: Transistor
- DI: Diode
- ZD: Zener Diode
- VA: Varistor
- TH: Termistor
- IC: Integrated Circuit

SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
		CAPACITORS	C040	0800288R	CAP.-ELECTRO. 4.7UF-M(SMG) 50V
C001	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	C041	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V
C002	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	C042	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V
C003	0800326R	CAP.-ELECTRO. 100UF-M 16V	C043	AA01101R	CERAMIC CAPACITOR(1UF 10V-F)
C004	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V	C044	0800326R	CAP.-ELECTRO. 100UF-M 16V
C005	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V	C045	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE
C006	0893188R	CERAMIC CAPACITOR(47000PF 16V)	C047	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE
C007	0800326R	CAP.-ELECTRO. 100UF-M 16V	C048	0800326R	CAP.-ELECTRO. 100UF-M 16V
C008	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	C050	0800326R	CAP.-ELECTRO. 100UF-M 16V
C009	0800352R	CAP.-ELECTRO.470UF 10V	C051	0800326R	CAP.-ELECTRO. 100UF-M 16V
C010	0893119R	CAP 1608CHIP 33PFJCH 50V TAPE	C052	0893208R	CAP 1608CHIP 1000PFKB 50V TAPE
C011	0893119R	CAP 1608CHIP 33PFJCH 50V TAPE	C053	0893208R	CAP 1608CHIP 1000PFKB 50V TAPE
C012	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	C054	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V
C013	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	C055	0800326R	CAP.-ELECTRO. 100UF-M 16V
C015	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V	C057	0800318R	CAP.-ELECTRO. 47UF-M 25V
C016	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V	C058	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE
C017	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	C064	0893227R	CERAMIC CAPACITOR(220000PF 16V)
C018	0800326R	CAP.-ELECTRO. 100UF-M 16V	C065	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE
C021	0800277R	CAP.-ELECTORO. 0.47UF-M 50V	C066	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V
C022	0893133R	CAP 1608CHIP 330PFJCH 50V TAPE	C067	0893208R	CAP 1608CHIP 1000PFKB 50V TAPE
C023	0893133R	CAP 1608CHIP 330PFJCH 50V TAPE	C068	0893208R	CAP 1608CHIP 1000PFKB 50V TAPE
C025	0800277R	CAP.-ELECTORO. 0.47UF-M 50V	C069	0893208R	CAP 1608CHIP 1000PFKB 50V TAPE
C026	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V	C070	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE
C027	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V	C071	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE
C028	0893213R	CAP1608CHIP 2200PFKB 50V TAPE	C100	0800352R	CAP.-ELECTRO.470UF 10V
C029	0893213R	CAP1608CHIP 2200PFKB 50V TAPE	C102	0800352R	CAP.-ELECTRO.470UF 10V
C030	0893213R	CAP1608CHIP 2200PFKB 50V TAPE	C103	0800326R	CAP.-ELECTRO. 100UF-M 16V
C032	0800318R	CAP.-ELECTRO. 47UF-M 25V	C105	0800352R	CAP.-ELECTRO.470UF 10V
C033	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	C106	0800352R	CAP.-ELECTRO.470UF 10V
C036	0800318R	CAP.-ELECTRO. 47UF-M 25V	C107	0800326R	CAP.-ELECTRO. 100UF-M 16V
C037	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	C108	0800326R	CAP.-ELECTRO. 100UF-M 16V
C038	0800288R	CAP.-ELECTRO. 4.7UF-M(SMG) 50V	C109	0893222R	CAP 1608CHIP10000PFKB 50V TAPE
C039	AA01101R	CERAMIC CAPACITOR(1UF 10V-F)	C110	0893222R	CAP 1608CHIP10000PFKB 50V TAPE

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
C111	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	C268	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V
C112	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	C270	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V
C113	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	C271	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V
C114	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	C354	0800326R	CAP.-ELECTRO. 100UF-M 16V
C115	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	C355	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE
C116	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	C356	0800352R	CAP.-ELECTRO.470UF 10V
C117	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	C357	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE
C118	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	C401	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V
C201	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V	C402	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V
C202	AA01101R	CERAMIC CAPACITOR(1UF 10V-F)	C403	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V
C203	AA01101R	CERAMIC CAPACITOR(1UF 10V-F)	C404	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V
C204	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V	C405	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V
C205	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	C406	0893208R	CAP 1608CHIP 1000PFKB 50V TAPE
C206	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V	C407	0893208R	CAP 1608CHIP 1000PFKB 50V TAPE
C207	AA01101R	CERAMIC CAPACITOR(1UF 10V-F)	C408	0800319R	CAP.-ELECTRO. 47UF-M 35V
C208	AA01101R	CERAMIC CAPACITOR(1UF 10V-F)	C409	0800319R	CAP.-ELECTRO. 47UF-M 35V
C209	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V	C410	0800328R	CAP. ELECTRO. 100UF-M 35V
C210	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	C411	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V
C211	0800318R	CAP.-ELECTRO. 47UF-M 25V	C412	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V
C212	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	C413	0800328R	CAP. ELECTRO. 100UF-M 35V
C213	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V	C414	0800319R	CAP.-ELECTRO. 47UF-M 35V
C214	AA01101R	CERAMIC CAPACITOR(1UF 10V-F)	C415	0880194R	CAP.-POLYESTER 0.1UF-J 50V
C215	AA01101R	CERAMIC CAPACITOR(1UF 10V-F)	C416	0284824F	CAP.-ELECTRO. 2200UF 35V
C216	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V	C417	0893227R	CERAMIC CAPACITOR(220000PF 16V)
C217	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	C418	0893227R	CERAMIC CAPACITOR(220000PF 16V)
C218	AA01101R	CERAMIC CAPACITOR(1UF 10V-F)	C419	0284824F	CAP.-ELECTRO. 2200UF 35V
C219	AA01101R	CERAMIC CAPACITOR(1UF 10V-F)	C420	0284824F	CAP.-ELECTRO. 2200UF 35V
C220	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V	C426	0880194R	CAP.-POLYESTER 0.1UF-J 50V
C221	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	C427	0880194R	CAP.-POLYESTER 0.1UF-J 50V
C222	0800352R	CAP.-ELECTRO.470UF 10V	C451	0880198R	CAP.-PLOY. 0.22UF-J 50V
C223	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V	C456	0880198R	CAP.-PLOY. 0.22UF-J 50V
C224	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V	C458	0880198R	CAP.-PLOY. 0.22UF-J 50V
C227	0800318R	CAP.-ELECTRO. 47UF-M 25V	C500	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V
C228	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V	C501	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V
C229	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V	C502	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V
C230	AA01101R	CERAMIC CAPACITOR(1UF 10V-F)	C503	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V
C231	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V	C504	0800326R	CAP.-ELECTRO. 100UF-M 16V
C232	AA01101R	CERAMIC CAPACITOR(1UF 10V-F)	C505	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE
C235	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V	C507	0284638R	CAP.-ELECTRO. 10UF-SME(BP) 16V
C236	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V	C509	0284638R	CAP.-ELECTRO. 10UF-SME(BP) 16V
C237	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V	C510	0284638R	CAP.-ELECTRO. 10UF-SME(BP) 16V
C238	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	C511	0800318R	CAP.-ELECTRO. 47UF-M 25V
C239	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V	C513	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V
C240	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V	C515	0800303R	CAP.-ELECTRO. 22UF-M 50V
C243	0800326R	CAP.-ELECTRO. 100UF-M 16V	C516	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V
C244	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	C517	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V
C245	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	C518	0800282R	CAP.-ELECTORO. 2.2UF-M(SMG) 50V
C246	0284647R	CAP.-ELECTRO.22UF-SME(BP) 16V	C519	0800326R	CAP.-ELECTRO. 100UF-M 16V
C247	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V	C520	0800326R	CAP.-ELECTRO. 100UF-M 16V
C248	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	C521	0893213R	CAP1608CHIP 2200PFKB 50V TAPE
C249	0800326R	CAP.-ELECTRO. 100UF-M 16V	C522	0800273R	CAP.-ELECTRO 0.22UF-M 50V
C250	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	C523	0800326R	CAP.-ELECTRO. 100UF-M 16V
C251	AA01111R	CERAMIC CAPACITOR(1.0UF 6.3V)	C524	0800352R	CAP.-ELECTRO.470UF 10V
C253	AA01111R	CERAMIC CAPACITOR(1.0UF 6.3V)	C525	0284638R	CAP.-ELECTRO. 10UF-SME(BP) 16V
C257	AA01101R	CERAMIC CAPACITOR(1UF 10V-F)	C526	0800282R	CAP.-ELECTORO. 2.2UF-M(SMG) 50V
C258	AA01101R	CERAMIC CAPACITOR(1UF 10V-F)	C527	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
C528	0893197R	CAP 1608CHIP 22000PFKB 25V TAPE	C619	0800318R	CAP.-ELECTRO. 47UF-M 25V
C529	0800282R	CAP.-ELECTORO. 2.2UF-M(SMG) 50V	C620	0880044R	CAP.-POLYESTER 0.01UF-KEB 50V
C530	0800334R	CAP.-ELECTRO. 220UF 10V	C621	0880207R	CAP.-POLYESTER 1.0UF-J 50V
C531	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	C622	0800347N	CAP.-ELECTRO. 330UF-M(SMG) 50V
C532	0800326R	CAP.-ELECTRO. 100UF-M 16V	C632	0880044R	CAP.-POLYESTER 0.01UF-KEB 50V
C535	0800326R	CAP.-ELECTRO. 100UF-M 16V	C633	0880194R	CAP.-POLYESTER 0.1UF-J 50V
C536	0800326R	CAP.-ELECTRO. 100UF-M 16V	C641	0880196R	CAP.-POLYESTER 0.15UF 50V HFT
C547	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	C650	0244109R	CAPACITOR-CERAMIC 4700PF-KB 50V
C548	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	C651	0800318R	CAP.-ELECTRO. 47UF-M 25V
C549	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	C701	0251771	CAP.-ELECTRO 220UF-M 160V
C550	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	C702	0299926F	CAPACITOR-POLYESTER FILM 0.1UF-K 200V
C551	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	C703	0890028M	CAP.-CERAMIC 330PF-K B 50V CYLINDRICAL
C552	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	C705	0244501R	CAP.-CERAMIC 1000PF-K 500V
C553	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	C706	0244501R	CAP.-CERAMIC 1000PF-K 500V
C554	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	⚠ C707	AJ00134F	CAP. CERAMIC CK45-R3DD102K-NR
C555	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	⚠ C708	AN01648F	4700PF 1500V METALLIZ POLYPROPYLENE FILM CAPA
C556	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	⚠ C709	AN01655F	8200PF 1500V METALLIZ POLYPROPYLENE FILM CAPA
C557	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	C710	AN01174F	CAPACITOR 0.33UF 250V METALLIZ POLYPROPYLENE
C558	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	C711	AN01174F	CAPACITOR 0.33UF 250V METALLIZ POLYPROPYLENE
C559	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	⚠ C712	0299707F	CAP.-POLYESTOR 0.015UF-K 630V
C560	0893126R	CAP 1608CHIP 100PFJCH 50V TAPE	C713	0880194R	CAP.-POLYESTER 0.1UF-J 50V
C561	0893126R	CAP 1608CHIP 100PFJCH 50V TAPE	C714	0880048R	CAP.-POLYESTER 0.022UF-KEB 50V
C562	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	C715	AJ00134	CAP. CERAMIC CK45-R3DD102K-GR
C563	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	C717	0243503R	CAP.-CERAMIC 150PF-K B 500V
C564	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	C718	AL00042	CAP.ELECTRO 33UF 350V
C565	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	C723	AN01657F	10000PF 1500V METALLIZ POLYPROPYLENE FILM CAP
C566	0893123R	CAP 1608CHIP 56PFJCH 50V TAPE	C724	AN01161F	CAPACITOR 0.1UF 250V METALLIZ POLYPROPYLENE
C567	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	C725	0890087R	CAP.-CERAMIC 1000PF-K 50V
C568	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	C726	0243503R	CAP.-CERAMIC 150PF-K B 500V
C569	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	C727	0244501R	CAP.-CERAMIC 1000PF-K 500V
C570	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	C729	0259471	CAP.-ELECTRO 6.8UF-M (BP) 50V
C571	0893114R	CAP 1608CHIP 12PFJCH 50V TAPE	C730	0244109R	CAPACITOR-CERAMIC 4700PF-KB 50V
C572	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	C731	0800329R	CAP.-ELECTRO. 100UF-M(SMG) 50V
C573	0800361N	CAP.-ELECTRO 1000UF 16V	C732	0880044R	CAP.-POLYESTER 0.01UF-KEB 50V
C575	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	C750	0284634R	CAP.-ELECTRO 4.7UF-SME(BP) 50V
C576	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	C801	0800318R	CAP.-ELECTRO. 47UF-M 25V
C577	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	C802	0800326R	CAP.-ELECTRO. 100UF-M 16V
C578	0800288R	CAP.-ELECTRO. 4.7UF-M(SMG) 50V	C804	AJ00559	CAPACITOT CERAMIC 2200PF2KV
C579	0893186R	CERAMIC CAPACITOR(33000PF 16V)	C805	0800326R	CAP.-ELECTRO. 100UF-M 16V
C580	0893205R	CAP 1608CHIP 560PFKB 50V TAPE	C807	0890087R	CAP.-CERAMIC 1000PF-K 50V
C581	0800326R	CAP.-ELECTRO. 100UF-M 16V	C808	0890084R	CAP.-CERAMIC 560PF-K 50V
C585	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	C810	0880044R	CAP.-POLYESTER 0.01UF-KEB 50V
C586	0800326R	CAP.-ELECTRO. 100UF-M 16V	C831	AL00037R	ALUMINIUM ELECTROLYTIC CAPACITOR(33UF350V)
C587	0800326R	CAP.-ELECTRO. 100UF-M 16V	C834	AJ00559	CAPACITOT CERAMIC 2200PF2KV
C603	AL01326R	ALUMINIUM ELECT. CAPACITOR PW(4.7UF 50V)	C835	0800326R	CAP.-ELECTRO. 100UF-M 16V
C604	0800326R	CAP.-ELECTRO. 100UF-M 16V	C837	0890087R	CAP.-CERAMIC 1000PF-K 50V
C605	0880039R	CAP.-POLYESTER 0.0047UF-KEB50V	C838	0890084R	CAP.-CERAMIC 560PF-K 50V
C610	0800345R	CAP.-ELECTRO. 330UF-M(SMG) 25V	C840	0880044R	CAP.-POLYESTER 0.01UF-KEB 50V
C611	0880051R	CAP.-POLYESTER 0.033UF-KEB 50V	C864	AJ00559	CAPACITOT CERAMIC 2200PF2KV
C612	0800326R	CAP.-ELECTRO. 100UF-M 16V	C865	0800326R	CAP.-ELECTRO. 100UF-M 16V
C613	AL01157R	CAP.ELECTROLYTIC 1UF-M(YXF)50V	C867	0890087R	CAP.-CERAMIC 1000PF-K 50V
C614	0800347N	CAP.-ELECTRO. 330UF-M(SMG) 50V	C868	0890083R	CAP.-CERAMIC 470PF-K 50V
C615	AL01143S	CAP.ELECTROLYTIC 2200UF-M(YXF)25V	C870	0880044R	CAP.-POLYESTER 0.01UF-KEB 50V
C616	0800288R	CAP.-ELECTRO. 4.7UF-M(SMG) 50V	C901	AJ00134	CAP. CERAMIC CK45-R3DD102K-GR
C617	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V	C902	AL00028R	ALUMINIUM ELECTROLYTIC CAPACITOR(100UF250V)
C618	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V	C903	AJ00195F	CAP. CERAMIC CK45-F2EA472ZYNN

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C904	AJ00195F	CAP. CERAMIC CK45-F2EA472ZYNN	CA14	0893126R	CAP 1608CHIP 100PFJCH 50V TAPE
C905	AL01737	CAP.ALUMI.200V 680UF KMH(M)	CA15	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE
C906	AL01737	CAP.ALUMI.200V 680UF KMH(M)	CA16	0800326R	CAP.-ELECTRO. 100UF-M 16V
C907	0800327R	CAP.-ELECTRO. 100UF-M 25V	CA17	0800288R	CAP.-ELECTRO. 4.7UF-M(SMG) 50V
⚠ C908	AJ00157F	CAP.CERAMIC CS10-B2GA102KYNS	CA18	0800288R	CAP.-ELECTRO. 4.7UF-M(SMG) 50V
C909	AJ00157F	CAP.CERAMIC CS10-B2GA102KYNS	CA19	0800288R	CAP.-ELECTRO. 4.7UF-M(SMG) 50V
C910	0299977F	CAPACITOR-POLYPROPYLENE FILM 0.0047UF-F 630V	CA20	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE
C911	0880194R	CAP.-POLYESTER 0.1UF-J 50V	CA21	0284638R	CAP.-ELECTRO. 10UF-SME(BP) 16V
C912	0880031R	CAP.-POLY.1000PF-K 50V	CA22	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE
C914	0880194R	CAP.-POLYESTER 0.1UF-J 50V	CA23	0893217R	CAP 1608CHIP 4700PFKB 50V TAPE
C915	AL01153S	CAP.ELECTR. 1000UF-M 35V	CA28	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V
C916	AJ00129	CAP. CERAMIC CK45-R3DD471K-GR	CA67	0800326R	CAP.-ELECTRO. 100UF-M 16V
C917	0880031R	CAP.-POLY.1000PF-K 50V	CA68	0284638R	CAP.-ELECTRO. 10UF-SME(BP) 16V
C918	AL01153S	CAP.ELECTR. 1000UF-M 35V	CA69	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V
C920	0800328R	CAP. ELECTRO. 100UF-M 35V	CA70	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V
C921	0800328R	CAP. ELECTRO. 100UF-M 35V	CA71	0284638R	CAP.-ELECTRO. 10UF-SME(BP) 16V
C922	0800335R	CAP.-ELECTRO. 220UF-M(SMG) 16V	CA72	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V
C923	0800328R	CAP. ELECTRO. 100UF-M 35V	CA73	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V
C924	0800335R	CAP.-ELECTRO. 220UF-M(SMG) 16V	CA81	0800326R	CAP.-ELECTRO. 100UF-M 16V
C925	AL01153S	CAP.ELECTR. 1000UF-M 35V	CA85	0880194R	CAP.-POLYESTER 0.1UF-J 50V
C927	AL01129S	CAP.ELECTROLYTIC 1000UF-M(YXF)16V	CA86	0800326R	CAP.-ELECTRO. 100UF-M 16V
C928	AJ00125R	CAP. CERAMIC CK45-R3DD221K-VR	CA87	0893126R	CAP 1608CHIP 100PFJCH 50V TAPE
C929	AL02301	CE-331M 160V KMX160VB330ML31	CA88	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE
C933	0800318R	CAP.-ELECTRO. 47UF-M 25V	CA89	0893126R	CAP 1608CHIP 100PFJCH 50V TAPE
⚠ C934	AJ00157F	CAP.CERAMIC CS10-B2GA102KYNS	CE01	0800354R	CAP.-ELECTRO. 470UF-M 25V
⚠ C935	AJ00157F	CAP.CERAMIC CS10-B2GA102KYNS	CE02	0880044R	CAP.-POLYESTER 0.01UF-KEB 50V
C936	0880031R	CAP.-POLY.1000PF-K 50V	CE03	0800318R	CAP.-ELECTRO. 47UF-M 25V
C937	0800328R	CAP. ELECTRO. 100UF-M 35V	CE04	0890076R	CAP.CERAMIC 150PF-K 50V
C938	0880181R	CAP.METAL-POLY.FLM 0.01UF 50V	CE05	0800326R	CAP.-ELECTRO. 100UF-M 16V
C939	0880194R	CAP.-POLYESTER 0.1UF-J 50V	CE06	0890064R	CAP.-CERAMIC 18PF-J SL 50V
C941	0880198R	CAP.-PLOY. 0.22UF-J 50V	CE08	0880194R	CAP.-POLYESTER 0.1UF-J 50V
C942	0800318R	CAP.-ELECTRO. 47UF-M 25V	CE09	0880194R	CAP.-POLYESTER 0.1UF-J 50V
C945	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V	CE10	0800321R	CAP.-ELECTRO. 47UF-M 50V
C947	0243511R	CAP.-CERAMIC 680PF-K 500V TAPE	CE11	0890074R	CAP.-CERAMIC 100PF-J 50V
C948	0800359R	CAP.-ELECTRO. 1000UF-M 10V	CE12	0244541F	CAPACITOR-CERAMIC 0.01MF-K B 500V
C949	0880194R	CAP.-POLYESTER 0.1UF-J 50V	CE13	0244541F	CAPACITOR-CERAMIC 0.01MF-K B 500V
C952	0800334R	CAP.-ELECTRO. 220UF 10V	CE14	AL00009R	ALU.ELEC.CAP. 47UF 160V
C957	0800303R	CAP.-ELECTRO. 22UF-M 50V	CE15	0247848R	CAP.-CERAMIC 56PF-J SL 500V
C959	0880194R	CAP.-POLYESTER 0.1UF-J 50V	CE16	AL00007R	ALUMINIUM ELECTROLYTIC CAPACITOR(220UF160V)
C963	AL01129S	CAP.ELECTROLYTIC 1000UF-M(YXF)16V	CE17	0244509R	CAP.-CERAMIC 4700PF-KB B 500V
C971	0244505R	CAP-CERAMIC 0.0022UF-K 500V	CE18	0890074R	CAP.-CERAMIC 100PF-J 50V
C972	0243511R	CAP.-CERAMIC 680PF-K 500V TAPE	CE19	AL00009R	ALU.ELEC.CAP. 47UF 160V
C973	0243511R	CAP.-CERAMIC 680PF-K 500V TAPE	CE20	AL00009R	ALU.ELEC.CAP. 47UF 160V
C974	0243511R	CAP.-CERAMIC 680PF-K 500V TAPE	CE21	0890079R	CAP.-CERAMIC 270PF-K 50V
C975	0243511R	CAP.-CERAMIC 680PF-K 500V TAPE	CE23	0890079R	CAP.-CERAMIC 270PF-K 50V
C976	AJ00138	CAP. CERAMIC CK45-R3DD222K-GRR	CF01	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V
C984	0880194R	CAP.-POLYESTER 0.1UF-J 50V	CF02	AL01296R	ALUMINIUM ELECT. CAPACITOR PW(0.47UF 350V)
CA01	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V	CF03	AN01631F	1000PF1500VMETALLIZ POLYPROPYLENE FILM CAPA
CA06	0893217R	CAP 1608CHIP 4700PFKB 50V TAPE	CF04	0880034R	CAP.-POLYESTER 0.0018UF-KEB50V
CA07	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	CF05	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V
CA08	0284638R	CAP.-ELECTRO. 10UF-SME(BP) 16V	CF06	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V
CA09	0284623R	CAP.-ELECTRO. 1UF-SME(BP) 50V	CF07	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V
CA10	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	CF08	0880044R	CAP.-POLYESTER 0.01UF-KEB 50V
CA11	0800288R	CAP.-ELECTRO. 4.7UF-M(SMG) 50V	CF09	0880196R	CAP.-POLYESTER 0.15UF 50V HFT
CA12	0800288R	CAP.-ELECTRO. 4.7UF-M(SMG) 50V	CF10	0880197R	CAP.POLYESTER 0.18UF 50V
CA13	0893126R	CAP 1608CHIP 100PFJCH 50V TAPE	CF10	0800326R	CAP.-ELECTRO. 100UF-M 16V

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
CF11	0880044R	CAP.-POLYESTER 0.01UF-KEB 50V	CK27	0800356N	CAP.-ELECTRO. 470UF-M 50V
CF12	0880198R	CAP.-PLOY. 0.22UF-J 50V	CK28	0800356N	CAP.-ELECTRO. 470UF-M 50V
CF13	0259151F	CAP.-ELECTRO. 100UF 160V	CK29	0890076R	CAP.CERAMIC 150PF-K 50V
CF16	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V	CK30	0890076R	CAP.CERAMIC 150PF-K 50V
CF17	0244109R	CAPACITOR-CERAMIC 4700PF-KB 50V	CK31	0890076R	CAP.CERAMIC 150PF-K 50V
CF18	0245158	CAPACITOT CERAMIC 68PF/2KV	CK32	0890076R	CAP.CERAMIC 150PF-K 50V
CF19	0245156	CAPACITOT CERAMIC 22PF/2KV	CK33	0890076R	CAP.CERAMIC 150PF-K 50V
CG23	0893118R	CAP 1608CHIP 27PFJCH 50V TAPE	CK34	0890076R	CAP.CERAMIC 150PF-K 50V
CG24	0893118R	CAP 1608CHIP 27PFJCH 50V TAPE	CK36	0800355N	CAP.ELECTRO. 470UF-M 35V
CG25	0893239R	CAP 1608CHIP 10000PFZF 50V TAPE	CK37	0800355N	CAP.ELECTRO. 470UF-M 35V
CG26	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	CK43	0880044R	CAP.-POLYESTER 0.01UF-KEB 50V
CG27	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	CM01	0800303R	CAP.-ELECTRO. 22UF-M 50V
CG28	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	CM02	0880044R	CAP.-POLYESTER 0.01UF-KEB 50V
CG29	0800282R	CAP.-ELECTORO. 2.2UF-M(SMG) 50V	CM03	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V
CG30	0800282R	CAP.-ELECTORO. 2.2UF-M(SMG) 50V	CM04	0880044R	CAP.-POLYESTER 0.01UF-KEB 50V
CG31	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	CM05	0880044R	CAP.-POLYESTER 0.01UF-KEB 50V
CG32	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	CM06	0880194R	CAP.-POLYESTER 0.1UF-J 50V
CG33	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	CM09	0880044R	CAP.-POLYESTER 0.01UF-KEB 50V
CG34	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	CM10	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V
CG35	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	CM11	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V
CG36	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V	CM12	0800318R	CAP.-ELECTRO. 47UF-M 25V
CG37	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	CM14	0880194R	CAP.-POLYESTER 0.1UF-J 50V
CG38	0800326R	CAP.-ELECTRO. 100UF-M 16V	CM15	0880194R	CAP.-POLYESTER 0.1UF-J 50V
CG39	0893239R	CAP 1608CHIP 10000PFZF 50V TAPE	CM16	0880194R	CAP.-POLYESTER 0.1UF-J 50V
CG40	0800326R	CAP.-ELECTRO. 100UF-M 16V	CP01	AN01445S	ACROSS CAPA 0.22UF 250V RE224
CG41	0893239R	CAP 1608CHIP 10000PFZF 50V TAPE	CP02	AN01443S	ACROSS CAPA 0.1UF 250V RE104
CG42	0800326R	CAP.-ELECTRO. 100UF-M 16V	CX01	0800326R	CAP.-ELECTRO. 100UF-M 16V
CG54	0800326R	CAP.-ELECTRO. 100UF-M 16V	CX03	0893123R	CAP 1608CHIP 56PFJCH 50V TAPE
CG55	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	CX04	0893123R	CAP 1608CHIP 56PFJCH 50V TAPE
CG56	0893206R	CAP 1608CHIP 680PFKB 50V TAPE	CX05	0800326R	CAP.-ELECTRO. 100UF-M 16V
CG57	0893211R	CAP 1608CHIP 1500PFKB 50V TAPE	CX06	0800326R	CAP.-ELECTRO. 100UF-M 16V
CG58	0893118R	CAP 1608CHIP 27PFJCH 50V TAPE	CX07	0800326R	CAP.-ELECTRO. 100UF-M 16V
CG59	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE	CX08	0800294R	CAP.-ELECTRO. 10UF-M(SMG) 50V
CG61	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	CX09	0893118R	CAP 1608CHIP 27PFJCH 50V TAPE
CG62	0893208R	CAP 1608CHIP 1000PFKB 50V TAPE	CX10	0893118R	CAP 1608CHIP 27PFJCH 50V TAPE
CG63	0800284R	CAP.-ELECTRO. 3.3UF-M(SMG) 50V	CX11	0893222R	CAP 1608CHIP10000PFKB 50V TAPE
CG64	0800279R	CAP.-ELECTORO. 1.0UF-M(SMG) 50V	CX12	0800326R	CAP.-ELECTRO. 100UF-M 16V
CK01	0800326R	CAP.-ELECTRO. 100UF-M 16V	CX13	0893222R	CAP 1608CHIP10000PFKB 50V TAPE
CK03	0800326R	CAP.-ELECTRO. 100UF-M 16V	CX14	0893222R	CAP 1608CHIP10000PFKB 50V TAPE
CK04	0880194R	CAP.-POLYESTER 0.1UF-J 50V	CX15	0893222R	CAP 1608CHIP10000PFKB 50V TAPE
CK05	0800326R	CAP.-ELECTRO. 100UF-M 16V	CX16	0893129R	CAP 1608CHIP 180PFJCH 50V TAPE
CK06	0880194R	CAP.-POLYESTER 0.1UF-J 50V	CX17	0893127R	CAP 1608CHIP 120PFJCH 50V TAPE
CK07	0800326R	CAP.-ELECTRO. 100UF-M 16V	CX18	0893222R	CAP 1608CHIP10000PFKB 50V TAPE
CK08	0880194R	CAP.-POLYESTER 0.1UF-J 50V	CX19	0893222R	CAP 1608CHIP10000PFKB 50V TAPE
CK09	0880194R	CAP.-POLYESTER 0.1UF-J 50V	CX20	0893222R	CAP 1608CHIP10000PFKB 50V TAPE
CK10	0800326R	CAP.-ELECTRO. 100UF-M 16V	CX21	0893222R	CAP 1608CHIP10000PFKB 50V TAPE
CK12	0890076R	CAP.CERAMIC 150PF-K 50V	CX22	0800277R	CAP.-ELECTORO. 0.47UF-M 50V
CK15	0880031R	CAP.-POLY.1000PF-K 50V	CX23	0893111R	CAP 1608CHIP 8PFCCH 50V TAPE
CK18	0880044R	CAP.-POLYESTER 0.01UF-KEB 50V	CX24	0893115R	CAP 1608CHIP 15PFJCH 50V TAPE
CK19	0880044R	CAP.-POLYESTER 0.01UF-KEB 50V	CX25	0893118R	CAP 1608CHIP 27PFJCH 50V TAPE
CK20	0890076R	CAP.CERAMIC 150PF-K 50V	CX26	0800318R	CAP.-ELECTRO. 47UF-M 25V
CK21	0890076R	CAP.CERAMIC 150PF-K 50V	CX27	0800326R	CAP.-ELECTRO. 100UF-M 16V
CK22	0890076R	CAP.CERAMIC 150PF-K 50V	CX28	0893179R	CAP.CHIP-CERAMIC 100000PF 16V TAPE
CK23	0890076R	CAP.CERAMIC 150PF-K 50V	CX62	0800334R	CAP.-ELECTRO. 220UF 10V
CK24	0890076R	CAP.CERAMIC 150PF-K 50V	CX63	0893222R	CAP 1608CHIP10000PFKB 50V TAPE
CK25	0890076R	CAP.CERAMIC 150PF-K 50V			

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
		DIODES	D526	CH02021M	DIODE 1SS133 T-72
D001	2331849M	ZENER HZ12C3 (TA) SI 500MW	D527	CH02021M	DIODE 1SS133 T-72
D002	2331849M	ZENER HZ12C3 (TA) SI 500MW	D528	2339825M	ZENER DIODE HZS-4 TAPE (B2) SI 400MW 3.9V
D003	2331849M	ZENER HZ12C3 (TA) SI 500MW	D529	CH02021M	DIODE 1SS133 T-72
D004	2331849M	ZENER HZ12C3 (TA) SI 500MW	D530	2339887M	ZENER HZS12C1 TA
D005	2331849M	ZENER HZ12C3 (TA) SI 500MW	D531	CH02021M	DIODE 1SS133 T-72
D006	2331849M	ZENER HZ12C3 (TA) SI 500MW	D605	CH02021M	DIODE 1SS133 T-72
D008	CH02021M	DIODE 1SS133 T-72	D606	CH02021M	DIODE 1SS133 T-72
D009	CH02021M	DIODE 1SS133 T-72	D607	2334243M	ZENER RD16E (B2 T2/TP/TA) SI 10MA 16.51V
D010	CH02021M	DIODE 1SS133 T-72	D608	2339847M	ZENER HZS6C1 TA
D011	CH02021M	DIODE 1SS133 T-72	D611	CH02001M	DIODE 1SR139-400
D012	CH02021M	DIODE 1SS133 T-72	D612	2339876M	ZENER HZS11B3 TA
D013	CH02021M	DIODE 1SS133 T-72	D613	CH02021M	DIODE 1SS133 T-72
D014	CH02021M	DIODE 1SS133 T-72	D615	CH02021M	DIODE 1SS133 T-72
D015	CH02021M	DIODE 1SS133 T-72	D617	CH02021M	DIODE 1SS133 T-72
D017	CH02021M	DIODE 1SS133 T-72	D620	CH02021M	DIODE 1SS133 T-72
D018	CH02021M	DIODE 1SS133 T-72	D621	CH02001M	DIODE 1SR139-400
D019	CH02021M	DIODE 1SS133 T-72	D622	CH02021M	DIODE 1SS133 T-72
D020	CH02021M	DIODE 1SS133 T-72	⚠ D702	2348511G	DIODE RS3FS LF-U1(014-201)
D021	CH02021M	DIODE 1SS133 T-72	⚠ D704	2336612M	DIODE RU3AM TA
D022	CH02021M	DIODE 1SS133 T-72	D705	CH02021M	DIODE 1SS133 T-72
D100	2339971M	ZENER HZS33-1 TA	D706	CH02021M	DIODE 1SS133 T-72
D101	2339971M	ZENER HZS33-1 TA	D708	CH02021M	DIODE 1SS133 T-72
D201	2331827M	ZENER DIODE HZ-9 TAPE (C1) SI 500MW 9.3V	⚠ D709	2335042M	ZENER HZ-22 (2L TP) SI 200MA 400MW
D202	2331827M	ZENER DIODE HZ-9 TAPE (C1) SI 500MW 9.3V	D710	CH02001M	DIODE 1SR139-400
D203	2331827M	ZENER DIODE HZ-9 TAPE (C1) SI 500MW 9.3V	D711	CH02102M	DIODE 10ELS4(400V)
D204	2331827M	ZENER DIODE HZ-9 TAPE (C1) SI 500MW 9.3V	⚠ D712	CH02011M	DIODE 1SR153-400
D205	2331827M	ZENER DIODE HZ-9 TAPE (C1) SI 500MW 9.3V	D713	CH00041M	DIODE ES1FV1 (1500V)
D206	2331827M	ZENER DIODE HZ-9 TAPE (C1) SI 500MW 9.3V	D714	CH00041M	DIODE ES1FV1 (1500V)
D207	CH02021M	DIODE 1SS133 T-72	D716	CH02011M	DIODE 1SR153-400
D208	2331771M	ZENER HZ-3A1 TAPE	D717	2339612M	ZENER HZS-3 TA (BLL) SI 200MA 3V
D209	2331771M	ZENER HZ-3A1 TAPE	D718	CH02021M	DIODE 1SS133 T-72
D401	CH02021M	DIODE 1SS133 T-72	D719	CH02001M	DIODE 1SR139-400
D402	CH02021M	DIODE 1SS133 T-72	D730	CH02021M	DIODE 1SS133 T-72
D403	CH02021M	DIODE 1SS133 T-72	D731	CH02021M	DIODE 1SS133 T-72
D404	CH02021M	DIODE 1SS133 T-72	D802	CH02021M	DIODE 1SS133 T-72
D405	CH02021M	DIODE 1SS133 T-72	D803	CH02021M	DIODE 1SS133 T-72
D406	CH02021M	DIODE 1SS133 T-72	D804	CH02021M	DIODE 1SS133 T-72
D407	CH02021M	DIODE 1SS133 T-72	D805	CH02021M	DIODE 1SS133 T-72
D501	CH02021M	DIODE 1SS133 T-72	D832	CH02021M	DIODE 1SS133 T-72
D502	CH02021M	DIODE 1SS133 T-72	D833	CH02021M	DIODE 1SS133 T-72
D503	CH02021M	DIODE 1SS133 T-72	D862	CH02021M	DIODE 1SS133 T-72
D504	CH02021M	DIODE 1SS133 T-72	D863	CH02021M	DIODE 1SS133 T-72
D505	CH02021M	DIODE 1SS133 T-72	⚠ D901	2342061	DIODE D3SB(A)60.
D506	CH02021M	DIODE 1SS133 T-72	D904	CH02001M	DIODE 1SR139-400
D507	2331827M	ZENER DIODE HZ-9 TAPE (C1) SI 500MW 9.3V	D905	CH02011M	DIODE 1SR153-400
D509	CH02021M	DIODE 1SS133 T-72	D907	2339981M	ZENER HZS36-1 TA
D513	2331827M	ZENER DIODE HZ-9 TAPE (C1) SI 500MW 9.3V	D908	CH02011M	DIODE 1SR153-400
D514	2331827M	ZENER DIODE HZ-9 TAPE (C1) SI 500MW 9.3V	D909	CH00173M	DIODE DFM1SD4(400V)TAPE
D515	2331827M	ZENER DIODE HZ-9 TAPE (C1) SI 500MW 9.3V	D910	CH00173M	DIODE DFM1SD4(400V)TAPE
D520	CH02021M	DIODE 1SS133 T-72	D911	CH02011M	DIODE 1SR153-400
D521	CH02021M	DIODE 1SS133 T-72	D913	2336612M	DIODE RU3AM TA
D522	CH02021M	DIODE 1SS133 T-72	D914	CH02132	DIODE 31DF4-FC
D523	CH02021M	DIODE 1SS133 T-72	D915	CH02132	DIODE 31DF4-FC
D524	CH02021M	DIODE 1SS133 T-72	D916	CH02132	DIODE 31DF4-FC
D525	CH02021M	DIODE 1SS133 T-72	D917	CH02001M	DIODE 1SR139-400

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
D918	2339943M	ZENER HZS24-3 TA	DK24	2334324M	ZENER DIODE RD36E TAPE (B3) SI 500MW 36V
D919	2338532M	DIODE EG01A (V1)	DK25	2334324M	ZENER DIODE RD36E TAPE (B3) SI 500MW 36V
D921	CH02021M	DIODE 1SS133 T-72	DK26	2334324M	ZENER DIODE RD36E TAPE (B3) SI 500MW 36V
D922	2339876M	ZENER HZS11B3 TA	DK27	2334324M	ZENER DIODE RD36E TAPE (B3) SI 500MW 36V
D923	CH00183R	LIGHT EMITTING DIODE (SLZ-981C-06-T1)	DK41	2331815M	ZENER HZ7-B2
D929	CH02131	DIODE 31DF6(600V)	DK42	2331815M	ZENER HZ7-B2
D931	2339961M	ZENER HZS30-1 TA	DM01	CH02021M	DIODE 1SS133 T-72
D932	CH02021M	DIODE 1SS133 T-72	DM02	CH02021M	DIODE 1SS133 T-72
D933	2339863M	ZENER HZS9A3 TA	DM03	CH00231	LED SLH-56VC3F
D934	CH02001M	DIODE 1SR139-400	DM04	2331849M	ZENER HZ12C3 (TA) SI 500MW
D935	CH02021M	DIODE 1SS133 T-72	DM05	2331849M	ZENER HZ12C3 (TA) SI 500MW
D937	CH02011M	DIODE 1SR153-400	DM07	2331849M	ZENER HZ12C3 (TA) SI 500MW
D938	CH02021M	DIODE 1SS133 T-72	DM08	2331849M	ZENER HZ12C3 (TA) SI 500MW
D940	2339854M	ZENER HZS7B1 TA	DM09	2331849M	ZENER HZ12C3 (TA) SI 500MW
D946	CH00182R	LIGHT EMITTING DIODE (SLZ-381C-06-T1)	DM10	2331849M	ZENER HZ12C3 (TA) SI 500MW
D948	CH00182R	LIGHT EMITTING DIODE (SLZ-381C-06-T1)	DM11	2331849M	ZENER HZ12C3 (TA) SI 500MW
D949	CH02021M	DIODE 1SS133 T-72	DM12	2331815M	ZENER HZ7-B2
D950	2339943M	ZENER HZS24-3 TA	DN09	2331849M	ZENER HZ12C3 (TA) SI 500MW
D951	CH00182R	LIGHT EMITTING DIODE (SLZ-381C-06-T1)			**FUSES AND FUSE HOLDERS**
D952	2339846M	ZENER HZS6B3 TA	EF90	FP00031R	FUSE HOLDER
D955	CH02021M	DIODE 1SS133 T-72	EFC	2974086S	CONNE 4P L=160 (43/50GX ONLY)
D956	CH02021M	DIODE 1SS133 T-72	EGR1	2964956	5J CONNE. L=360
D960	CH02021M	DIODE 1SS133 T-72	EGR2	2966821	4J CONNE. L=300
D962	CH02021M	DIODE 1SS133 T-72	EP01	FP00031R	FUSE HOLDER
D963	2339932M	DIODE HZS22-2 TA	F901	2722357	FUSE AC04A
D964	CH02021M	DIODE 1SS133 T-72	⚠ F902	2722383M	FUSE DC01A-JUHT251DC
D973	CH02132	DIODE 31DF4-FC	⚠ F931	AZ00104M	PROTECTOR(CRXT491002)
DA01	CH02021M	DIODE 1SS133 T-72	FP01	2722359	FUSE AC06A
DA02	CH02021M	DIODE 1SS133 T-72			**SPARK GAPS**
DA03	2331771M	ZENER HZ-3A1 TAPE	⚠ G701	CJ00071R	SPARK GAP 1.5KV
DA04	2331771M	ZENER HZ-3A1 TAPE	⚠ G801	CJ00071R	SPARK GAP 1.5KV
DE03	CH02021M	DIODE 1SS133 T-72	⚠ G802	CJ00071R	SPARK GAP 1.5KV
DE04	CH02001M	DIODE 1SR139-400	⚠ G831	CJ00071R	SPARK GAP 1.5KV
DE05	CH02001M	DIODE 1SR139-400	⚠ G832	CJ00071R	SPARK GAP 1.5KV
DE06	CH02001M	DIODE 1SR139-400	⚠ G861	CJ00071R	SPARK GAP 1.5KV
DE07	CH02001M	DIODE 1SR139-400	⚠ G862	CJ00071R	SPARK GAP 1.5KV
DF01	CH02021M	DIODE 1SS133 T-72	⚠ GF01	CJ00072R	SPARK GAP 2.5KV
DF02	CH02021M	DIODE 1SS133 T-72			**INTERGRATED CIRCUITS**
DF03	CH02021M	DIODE 1SS133 T-72	I001	CP07781U	MAIN MICRO
DF04	2338531M	DIODE EG-01C (V) SI 0.5A	I002	CK35893R	IC CAT24WC16J1
DF05	CH02021M	DIODE 1SS133 T-72	I003	CK35441R	ANALOG MONOLITHIC IC(MM1501)
DF07	CH02021M	DIODE 1SS133 T-72	I004	CK31071R	IC CXA1875AM
DF08	CH02021M	DIODE 1SS133 T-72	I005	2000541	IC M51951BSL
DF09	CH02021M	DIODE 1SS133 T-72	I201	CK30941U	IC CXA2069Q
DK01	CH02301M	DIODE D2S4M (2A-40V)	I304	CP04232	ANALOG MONOLITHIC IC BA033T
DK04	CH02011M	DIODE 1SR153-400	I401	2004751	IC TA8200AH
DK05	CH02011M	DIODE 1SR153-400	I501	CP03552U	IC TA1222BN
DK06	CH02021M	DIODE 1SS133 T-72	I502	CK35501R	MONO IC(NJM2284M-TE1)
DK16	2334324M	ZENER DIODE RD36E TAPE (B3) SI 500MW 36V	I503	CK35441R	ANALOG MONOLITHIC IC(MM1501)
DK17	2334324M	ZENER DIODE RD36E TAPE (B3) SI 500MW 36V	I504	CP07611	ANALOG MONOLITHIC IC (NJM7805FA
DK18	2334324M	ZENER DIODE RD36E TAPE (B3) SI 500MW 36V	I505	CP07614	ANALOG MONO IC (NJM7809FA)
DK19	2334324M	ZENER DIODE RD36E TAPE (B3) SI 500MW 36V	I601	2003541	IC LA7838
DK20	2334324M	ZENER DIODE RD36E TAPE (B3) SI 500MW 36V	⚠ I901	CZ00861	IC STR-F6628
DK21	2334324M	ZENER DIODE RD36E TAPE (B3) SI 500MW 36V	⚠ I902	CP05431	ANALOG MONOLITHIC IC (TLP621F D4-GRL)
DK22	2334324M	ZENER DIODE RD36E TAPE (B3) SI 500MW 36V	⚠ I903	CP05431	ANALOG MONOLITHIC IC (TLP621F D4-GRL)
DK23	2334324M	ZENER DIODE RD36E TAPE (B3) SI 500MW 36V	⚠ I904	CP07731U	MONO IC MIP0253PSCF

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
⚠ I905	2381349	HYBRID IC (SE120N:+B CONT.)	L710	BZ00318	LINEARITY COIL 50UH-W
⚠ I907	CP05431	ANALOG MONOLITHIC IC (TLP621F D4-GRL)	L720	2125824N	FILT.COIL(LHL08 1000UH)
I921	CP07611	ANALOG MONOLITHIC IC (NJM7805FA	L721	2125824N	FILT.COIL(LHL08 1000UH)
I923	CP07615	ANALOG MONO IC (NJM7812FA)	L730	BH01342M	COIL FERRITE BEADS 2.3UH
I924	CP07665	MONO IC (NJM7912FA)	L803	BH00699R	COIL 150UH
IA01	CK35272R	IC NJW1133AM-TE1	L833	BH00699R	COIL 150UH
IA07	CK35291R	IC NJM2043M	L863	BH00699R	COIL 150UH
IG02	CK35341R	IC SDA9589X	L901	BZ04591	LINE FILTER 1.5MH 3.5A
IG04	CK07511R	IC M52684AFP	L902	BH01341M	COIL FERRITE BEADS 0.8UH
IK01	CP07611	ANALOG MONOLITHIC IC (NJM7805FA	L903	BH01341M	COIL FERRITE BEADS 0.8UH
IK02	CP01631R	ICL-PST9142	L905	BH01342M	COIL FERRITE BEADS 2.3UH
IK04	CZ00431	HYBRID IC (STK392-110)	L906	2125806N	FILT.COIL(LHL08 47UH)
IK05	CZ00431	HYBRID IC (STK392-110)	L907	2125806N	FILT.COIL(LHL08 47UH)
IX01	CK07631R	DIGITAL MONOLITHIC IC (TC90A45F)	L910	BZ03931	COIL DC LINE NOISE FILTER 1MH
		INDUCTORS	L912	2125811N	FILT.COIL(LHL08 100UH)
L001	BH00697R	FILTER COIL 100UH	L917	2125811N	FILT.COIL(LHL08 100UH)
L002	BH00697R	FILTER COIL 100UH	L921	BH01342M	COIL FERRITE BEADS 2.3UH
L003	BH00697R	FILTER COIL 100UH	L939	2125811N	FILT.COIL(LHL08 100UH)
L004	BH00697R	FILTER COIL 100UH	L940	2125811N	FILT.COIL(LHL08 100UH)
L007	BH00697R	FILTER COIL 100UH	L941	2125811N	FILT.COIL(LHL08 100UH)
L008	BH00697R	FILTER COIL 100UH	LA01	BH00697R	FILTER COIL 100UH
L009	2125811N	FILT.COIL(LHL08 100UH)	LA13	BH00697R	FILTER COIL 100UH
L100	2123781R	FILTER COIL 100UH(EL0607)	LE01	2123097M	LAL02 TYPE AXIAL COIL 3.9UH-K
L101	2123781R	FILTER COIL 100UH(EL0607)	LE02	BH01341M	COIL FERRITE BEADS 0.8UH
L102	BH00697R	FILTER COIL 100UH	LE03	BH01341M	COIL FERRITE BEADS 0.8UH
L103	BH00697R	FILTER COIL 100UH	LE04	BH01341M	COIL FERRITE BEADS 0.8UH
L104	2123781R	FILTER COIL 100UH(EL0607)	LF01	BH00229R	COIL 472K-1T7608A
L105	BH00697R	FILTER COIL 100UH	LF02	BH00229R	COIL 472K-1T7608A
L106	2123781R	FILTER COIL 100UH(EL0607)	LG02	2123781R	FILTER COIL 100UH(EL0607)
L107	BH01341M	COIL FERRITE BEADS 0.8UH	LG05	BH00697R	FILTER COIL 100UH
L108	BH01341M	COIL FERRITE BEADS 0.8UH	LG06	2123781R	FILTER COIL 100UH(EL0607)
L109	BH01341M	COIL FERRITE BEADS 0.8UH	LG07	BH00684R	COIL 10UH
L201	BH00697R	FILTER COIL 100UH	LG09	BH00697R	FILTER COIL 100UH
L202	BH00697R	FILTER COIL 100UH	LK07	BH01341M	COIL FERRITE BEADS 0.8UH
L203	BH00697R	FILTER COIL 100UH	LK08	BH01341M	COIL FERRITE BEADS 0.8UH
L204	BH00697R	FILTER COIL 100UH	LK09	BH01342M	COIL FERRITE BEADS 2.3UH
L205	BH00697R	FILTER COIL 100UH	LK10	BH01342M	COIL FERRITE BEADS 2.3UH
L401	BH01341M	COIL FERRITE BEADS 0.8UH	LK11	BH01342M	COIL FERRITE BEADS 2.3UH
L402	BH01341M	COIL FERRITE BEADS 0.8UH	LK13	BH01342M	COIL FERRITE BEADS 2.3UH
L403	BH01341M	COIL FERRITE BEADS 0.8UH	LK14	2125808N	FILT.COIL(LHL08 68UH)
L500	BH00697R	FILTER COIL 100UH	LP01	BZ04581	LINE FILTER 4.7MH 3.5A
L501	BH00697R	FILTER COIL 100UH	LX01	BH00697R	FILTER COIL 100UH
L502	BH00697R	FILTER COIL 100UH	LX02	BH00697R	FILTER COIL 100UH
L503	2123781R	FILTER COIL 100UH(EL0607)	LX03	BH00697R	FILTER COIL 100UH
L504	BH00697R	FILTER COIL 100UH	LX05	2123105M	LAL02 AXIAL COIL 15UH-K
L505	2123112M	COIL-AXIAL 47UH-K	LX14	2123107M	LAL02 AXIAL COIL 22UH-K
L507	BH00697R	FILTER COIL 100UH	LX15	BH00697R	FILTER COIL 100UH
L508	2125797N	FILT.COIL(LHL08 10UH)	LX17	BH00697R	FILTER COIL 100UH
L509	BH00697R	FILTER COIL 100UH	LX19	2123107M	LAL02 AXIAL COIL 22UH-K
L602	BH01341M	COIL FERRITE BEADS 0.8UH			**TRANSISTORS**
L702	BH01341M	COIL FERRITE BEADS 0.8UH	Q002	CA01271R	TRS.CHIP 2SC5343S
L703	BH01342M	COIL FERRITE BEADS 2.3UH	Q003	CA01271R	TRS.CHIP 2SC5343S
L704	BH01341M	COIL FERRITE BEADS 0.8UH	Q004	CA01271R	TRS.CHIP 2SC5343S
L705	BZ04425	CHOKE COIL 1000UH	Q005	CA01271R	TRS.CHIP 2SC5343S
L706	2125814F	FILT.COIL(LHL08 180UH)	Q006	CA01271R	TRS.CHIP 2SC5343S
L708	2125803F	FILT.COIL(LHL08 27UH)	Q007	CA01271R	TRS.CHIP 2SC5343S
L709	BZ00317	LINEARITY COIL 140UH-W	Q008	CA01271R	TRS.CHIP 2SC5343S

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
Q009	CA01271R	TRS.CHIP 2SC5343S	Q511	CA01271R	TRS.CHIP 2SC5343S
Q010	CA01271R	TRS.CHIP 2SC5343S	Q512	CA01271R	TRS.CHIP 2SC5343S
Q011	CA01271R	TRS.CHIP 2SC5343S	Q513	CA01271R	TRS.CHIP 2SC5343S
Q012	CA01271R	TRS.CHIP 2SC5343S	Q514	CA01271R	TRS.CHIP 2SC5343S
Q013	CA01271R	TRS.CHIP 2SC5343S	Q515	CA01261R	TRS.CHIP 2SA1980S
Q014	CA01271R	TRS.CHIP 2SC5343S	Q516	CA01261R	TRS.CHIP 2SA1980S
Q015	CA01261R	TRS.CHIP 2SA1980S	Q517	CA01271R	TRS.CHIP 2SC5343S
Q016	CA01261R	TRS.CHIP 2SA1980S	Q519	CA01271R	TRS.CHIP 2SC5343S
Q017	CA01261R	TRS.CHIP 2SA1980S	Q520	CA01271R	TRS.CHIP 2SC5343S
Q018	CA01271R	TRS.CHIP 2SC5343S	Q521	CA01271R	TRS.CHIP 2SC5343S
Q019	CA01261R	TRS.CHIP 2SA1980S	Q522	CA01261R	TRS.CHIP 2SA1980S
Q021	CA01261R	TRS.CHIP 2SA1980S	Q523	CA01271R	TRS.CHIP 2SC5343S
Q022	CA01261R	TRS.CHIP 2SA1980S	Q602	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW
Q023	CA01271R	TRS.CHIP 2SC5343S	Q603	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW
Q024	CA01271R	TRS.CHIP 2SC5343S	Q607	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW
Q025	CA01271R	TRS.CHIP 2SC5343S	Q609	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW
Q029	CA01271R	TRS.CHIP 2SC5343S	Q610	2320663M	TRS. 2SC1213A (C)
Q030	CA01271R	TRS.CHIP 2SC5343S	Q611	2312174F	TRS. 2SD2375-P(LT)
Q031	CA01271R	TRS.CHIP 2SC5343S	Q612	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW
Q100	CA01271R	TRS.CHIP 2SC5343S	Q701	2326216	TRS. 2SC3116 (S/T)
Q101	CA01271R	TRS.CHIP 2SC5343S	Q702	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW
Q102	CA01271R	TRS.CHIP 2SC5343S	Q703	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW
Q103	CA01271R	TRS.CHIP 2SC5343S	Q710	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW
Q105	CA01271R	TRS.CHIP 2SC5343S	⚠ Q777	CF02671F	TRS. 2SC5680
Q106	CA01271R	TRS.CHIP 2SC5343S	Q801	2312372F	TRS-2SC3942
Q203	2320663M	TRS. 2SC1213A (C)	Q802	2320663M	TRS. 2SC1213A (C)
Q205	CA01271R	TRS.CHIP 2SC5343S	Q803	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW
Q206	CA01261R	TRS.CHIP 2SA1980S	Q804	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW
Q207	CA01271R	TRS.CHIP 2SC5343S	Q805	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW
Q208	CA01271R	TRS.CHIP 2SC5343S	Q806	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW
Q209	CA01261R	TRS.CHIP 2SA1980S	Q831	2312372F	TRS-2SC3942
Q210	CA01271R	TRS.CHIP 2SC5343S	Q832	2320663M	TRS. 2SC1213A (C)
Q211	CA01271R	TRS.CHIP 2SC5343S	Q833	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW
Q212	CA01271R	TRS.CHIP 2SC5343S	Q861	2312372F	TRS-2SC3942
Q213	CA01271R	TRS.CHIP 2SC5343S	Q862	2320663M	TRS. 2SC1213A (C)
Q214	CA01271R	TRS.CHIP 2SC5343S	Q863	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW
Q215	CA01271R	TRS.CHIP 2SC5343S	Q902	2312174F	TRS. 2SD2375-P(LT)
Q216	CA01271R	TRS.CHIP 2SC5343S	Q903	CF02281R	TRS. 2SA821S
Q217	CA01271R	TRS.CHIP 2SC5343S	Q908	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW
Q218	CA01261R	TRS.CHIP 2SA1980S	Q909	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW
Q219	CA01271R	TRS.CHIP 2SC5343S	Q910	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW
Q220	CA01271R	TRS.CHIP 2SC5343S	Q911	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW
Q224	CA01271R	TRS.CHIP 2SC5343S	Q914	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW
Q225	CA01271R	TRS.CHIP 2SC5343S	Q915	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW
Q401	CA00461R	TRS.CHIP 2SD2114K 20V TAPE	Q931	2320595M	TRS. 2SC458 (D TP/D TZ)
Q402	CA00461R	TRS.CHIP 2SD2114K 20V TAPE	QA01	CA01271R	TRS.CHIP 2SC5343S
Q403	CA01271R	TRS.CHIP 2SC5343S	QA02	CA01261R	TRS.CHIP 2SA1980S
Q404	CA01271R	TRS.CHIP 2SC5343S	QA03	CA01271R	TRS.CHIP 2SC5343S
Q503	CA01271R	TRS.CHIP 2SC5343S	QA04	CA01261R	TRS.CHIP 2SA1980S
Q504	CA01271R	TRS.CHIP 2SC5343S	QA05	CA01271R	TRS.CHIP 2SC5343S
Q505	CA01271R	TRS.CHIP 2SC5343S	QA06	CA01271R	TRS.CHIP 2SC5343S
Q506	CA01271R	TRS.CHIP 2SC5343S	QE01	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW
Q507	CA01271R	TRS.CHIP 2SC5343S	QE02	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW
Q508	CA01261R	TRS.CHIP 2SA1980S	QE03	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW
Q509	CA01261R	TRS.CHIP 2SA1980S	QE04	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW
Q510	CA01261R	TRS.CHIP 2SA1980S	QE05	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
QE06	2320663M	TRS. 2SC1213A (C)	R006	0790051R	RES.CHIP 1/16W 10K OHM
QE07	2321351M	TRS. 2SA836/844D/E 100MA 200MW 200MHZSI TAPE	R007	0790037R	RES.CHIP 1/16W 1.0K OHM
QE08	2315381	TRS. 2SA1837	R008	0790038R	RES.CHIP 1/16W 1.2K OHM
QE09	2315391	TRS. 2SC4793	R009	0790046R	RES.CHIP 1/16W 4.7K OHM
QE10	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW	R010	0790059R	RES.CHIP 1/16W 47K OHM
QE11	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW	R011	0790047R	RES.CHIP 1/16W 5.6K OHM
QE12	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW	R012	0790047R	RES.CHIP 1/16W 5.6K OHM
QF01	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW	R013	0790024R	RES.CHIP 1/16W 100 OHM
QF03	2320663M	TRS. 2SC1213A (C)	R014	0790024R	RES.CHIP 1/16W 100 OHM
QF04	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW	R015	0790024R	RES.CHIP 1/16W 100 OHM
QF05	2320663M	TRS. 2SC1213A (C)	R016	0790024R	RES.CHIP 1/16W 100 OHM
QF06	2315631F	TRANSISTOR 2SC4633-HIT-CB7	R017	0790047R	RES.CHIP 1/16W 5.6K OHM
QF07	2315631F	TRANSISTOR 2SC4633-HIT-CB7	R018	0790051R	RES.CHIP 1/16W 10K OHM
QF08	2315631F	TRANSISTOR 2SC4633-HIT-CB7	R019	0790059R	RES.CHIP 1/16W 47K OHM
QF09	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW	R020	0790024R	RES.CHIP 1/16W 100 OHM
QF10	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW	R021	0790024R	RES.CHIP 1/16W 100 OHM
QF11	2320663M	TRS. 2SC1213A (C)	R022	0790024R	RES.CHIP 1/16W 100 OHM
QF12	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW	R023	0790024R	RES.CHIP 1/16W 100 OHM
QF13	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW	R024	0790055R	RES.CHIP 1/16W 22K OHM
QF14	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW	R025	0790047R	RES.CHIP 1/16W 5.6K OHM
QF15	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW	R026	0790047R	RES.CHIP 1/16W 5.6K OHM
QG01	CA01261R	TRS.CHIP 2SA1980S	R027	0790055R	RES.CHIP 1/16W 22K OHM
QG02	CA01261R	TRS.CHIP 2SA1980S	R028	0790055R	RES.CHIP 1/16W 22K OHM
QG03	CA01261R	TRS.CHIP 2SA1980S	R029	0790037R	RES.CHIP 1/16W 1.0K OHM
QG04	CA01271R	TRS.CHIP 2SC5343S	R030	0790037R	RES.CHIP 1/16W 1.0K OHM
QG13	CA01261R	TRS.CHIP 2SA1980S	R031	0790037R	RES.CHIP 1/16W 1.0K OHM
QG14	CA01271R	TRS.CHIP 2SC5343S	R032	0790059R	RES.CHIP 1/16W 47K OHM
QG15	CA01271R	TRS.CHIP 2SC5343S	R033	0790024R	RES.CHIP 1/16W 100 OHM
QG16	CA01271R	TRS.CHIP 2SC5343S	R034	0790037R	RES.CHIP 1/16W 1.0K OHM
QG17	CA01271R	TRS.CHIP 2SC5343S	R035	0790026R	RES.CHIP 1/16W 150 OHM
QG18	CA01271R	TRS.CHIP 2SC5343S	R036	0790055R	RES.CHIP 1/16W 22K OHM
QK01	2312171	TRS. 2SC3852	R037	0790047R	RES.CHIP 1/16W 5.6K OHM
QK02	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW	R038	0790055R	RES.CHIP 1/16W 22K OHM
QK03	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ 400MW	R039	0790037R	RES.CHIP 1/16W 1.0K OHM
QK04	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW	R040	0790037R	RES.CHIP 1/16W 1.0K OHM
QK06	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW	R041	0790037R	RES.CHIP 1/16W 1.0K OHM
QK07	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW	R042	0790051R	RES.CHIP 1/16W 10K OHM
QK08	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW	R043	0790051R	RES.CHIP 1/16W 10K OHM
QM01	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW	R044	0790051R	RES.CHIP 1/16W 10K OHM
QM02	2312992	PHOTO TRS. RPT-38PT3F (M)	R045	0790051R	RES.CHIP 1/16W 10K OHM
QM03	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW	R046	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
QM04	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW	R047	0790034R	RES.CHIP 1/16W 560 OHM
QM05	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ200MW	R048	0790031R	RES.CHIP 1/16W 330 OHM
QX01	CA01271R	TRS.CHIP 2SC5343S	R049	0790029R	RES.CHIP 1/16W 270 OHM
QX02	CA01261R	TRS.CHIP 2SA1980S	R050	0790034R	RES.CHIP 1/16W 560 OHM
QX03	CA01271R	TRS.CHIP 2SC5343S	R051	0790038R	RES.CHIP 1/16W 1.2K OHM
QX04	CA01271R	TRS.CHIP 2SC5343S	R052	0790039R	RES.CHIP 1/16W 1.5K OHM
QX05	CA01271R	TRS.CHIP 2SC5343S	R053	0790055R	RES.CHIP 1/16W 22K OHM
QX06	CA01271R	TRS.CHIP 2SC5343S	R054	0790055R	RES.CHIP 1/16W 22K OHM
QX07	CA01261R	TRS.CHIP 2SA1980S	R055	0790037R	RES.CHIP 1/16W 1.0K OHM
QX08	CA01271R	TRS.CHIP 2SC5343S	R056	0790037R	RES.CHIP 1/16W 1.0K OHM
QX09	CA01271R	TRS.CHIP 2SC5343S	R057	0790037R	RES.CHIP 1/16W 1.0K OHM
QX10	CA01271R	TRS.CHIP 2SC5343S	R058	0790037R	RES.CHIP 1/16W 1.0K OHM
		RESISTORS	R059	0790024R	RES.CHIP 1/16W 100 OHM
R004	0790061R	RES.CHIP 1/16W 56K OHM	R060	0790024R	RES.CHIP 1/16W 100 OHM
R005	0790064R	RES.CHIP 1/16W 100K OHM	R061	0790024R	RES.CHIP 1/16W 100 OHM

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R062	0790055R	RES.CHIP 1/16W 22K OHM	R0E3	0790058R	RES.CHIP 1/16W 39K OHM
R063	0790055R	RES.CHIP 1/16W 22K OHM	R0E4	AT03867M	560OHM 1/2W RDS50 CARBON FILM RESISTOR
R064	0790024R	RES.CHIP 1/16W 100 OHM	R0E5	0790055R	RES.CHIP 1/16W 22K OHM
R065	0790024R	RES.CHIP 1/16W 100 OHM	R0E6	0790046R	RES.CHIP 1/16W 4.7K OHM
R066	0790037R	RES.CHIP 1/16W 1.0K OHM	R0E7	0790052R	RES.CHIP 1/16W 12K OHM
R067	0790059R	RES.CHIP 1/16W 47K OHM	R0E8	0790059R	RES.CHIP 1/16W 47K OHM
R068	0790052R	RES.CHIP 1/16W 12K OHM	R0E9	0790059R	RES.CHIP 1/16W 47K OHM
R069	0790051R	RES.CHIP 1/16W 10K OHM	R0F1	0790051R	RES.CHIP 1/16W 10K OHM
R070	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	R0F4	0790024R	RES.CHIP 1/16W 100 OHM
R071	0790024R	RES.CHIP 1/16W 100 OHM	R0F5	0790059R	RES.CHIP 1/16W 47K OHM
R072	0790024R	RES.CHIP 1/16W 100 OHM	R0F6	0790024R	RES.CHIP 1/16W 100 OHM
R073	0790024R	RES.CHIP 1/16W 100 OHM	R0G1	0790037R	RES.CHIP 1/16W 1.0K OHM
R074	0790024R	RES.CHIP 1/16W 100 OHM	R0G2	0790051R	RES.CHIP 1/16W 10K OHM
R075	0790024R	RES.CHIP 1/16W 100 OHM	R0G3	0790059R	RES.CHIP 1/16W 47K OHM
R076	0790024R	RES.CHIP 1/16W 100 OHM	R0G4	0790051R	RES.CHIP 1/16W 10K OHM
R077	0790037R	RES.CHIP 1/16W 1.0K OHM	R0G5	0790037R	RES.CHIP 1/16W 1.0K OHM
R078	0790024R	RES.CHIP 1/16W 100 OHM	R0G6	0790037R	RES.CHIP 1/16W 1.0K OHM
R079	0790055R	RES.CHIP 1/16W 22K OHM	R0G7	0790024R	RES.CHIP 1/16W 100 OHM
R080	0790047R	RES.CHIP 1/16W 5.6K OHM	R0G8	0790036R	RES.CHIP 1/16W 820 OHM
R081	0790024R	RES.CHIP 1/16W 100 OHM	R0G9	0790059R	RES.CHIP 1/16W 47K OHM
R083	0790047R	RES.CHIP 1/16W 5.6K OHM	R0H1	0790053R	RES.CHIP 1/16W 15K OHM
R084	0790024R	RES.CHIP 1/16W 100 OHM	R0H2	0790051R	RES.CHIP 1/16W 10K OHM
R085	0790037R	RES.CHIP 1/16W 1.0K OHM	R0H3	0790061R	RES.CHIP 1/16W 56K OHM
R086	0790024R	RES.CHIP 1/16W 100 OHM	R0H4	0790037R	RES.CHIP 1/16W 1.0K OHM
R087	0790024R	RES.CHIP 1/16W 100 OHM	R0H5	0790036R	RES.CHIP 1/16W 820 OHM
R088	0790046R	RES.CHIP 1/16W 4.7K OHM	R0H6	0790046R	RES.CHIP 1/16W 4.7K OHM
R089	0790061R	RES.CHIP 1/16W 56K OHM	R0H7	0790059R	RES.CHIP 1/16W 47K OHM
R090	0790063R	RES.CHIP 1/16W 82K OHM	R0H8	0790059R	RES.CHIP 1/16W 47K OHM
R091	0790027R	RES.CHIP 1/16W 180 OHM	R0J1	0790037R	RES.CHIP 1/16W 1.0K OHM
R092	0790024R	RES.CHIP 1/16W 100 OHM	R0J2	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
R093	0790024R	RES.CHIP 1/16W 100 OHM	R0J3	0790051R	RES.CHIP 1/16W 10K OHM
R094	0790024R	RES.CHIP 1/16W 100 OHM	R0J4	0790024R	RES.CHIP 1/16W 100 OHM
R095	0790055R	RES.CHIP 1/16W 22K OHM	R0J5	0790026R	RES.CHIP 1/16W 150 OHM
R096	0790053R	RES.CHIP 1/16W 15K OHM	R0J6	0790019R	RES.CHIP 1/16W 47 OHM
R097	0790024R	RES.CHIP 1/16W 100 OHM	R0J8	0790026R	RES.CHIP 1/16W 150 OHM
R098	0790024R	RES.CHIP 1/16W 100 OHM	R0J9	0790019R	RES.CHIP 1/16W 47 OHM
R099	0790024R	RES.CHIP 1/16W 100 OHM	R0K3	0790026R	RES.CHIP 1/16W 150 OHM
R0A1	0790046R	RES.CHIP 1/16W 4.7K OHM	R0K4	0790019R	RES.CHIP 1/16W 47 OHM
R0A2	0790055R	RES.CHIP 1/16W 22K OHM	R0K7	0790034R	RES.CHIP 1/16W 560 OHM
R0A3	0790064R	RES.CHIP 1/16W 100K OHM	R0L2	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
R0A4	0790047R	RES.CHIP 1/16W 5.6K OHM	R0L3	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
R0A5	0790047R	RES.CHIP 1/16W 5.6K OHM	R0L4	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
R0A6	0790024R	RES.CHIP 1/16W 100 OHM	R0L5	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
R0A7	0790024R	RES.CHIP 1/16W 100 OHM	R0L7	0790037R	RES.CHIP 1/16W 1.0K OHM
R0A8	0790024R	RES.CHIP 1/16W 100 OHM	R0L8	0790064R	RES.CHIP 1/16W 100K OHM
R0A9	0790059R	RES.CHIP 1/16W 47K OHM	R0L9	0790047R	RES.CHIP 1/16W 5.6K OHM
R0C1	0790059R	RES.CHIP 1/16W 47K OHM	R0M1	0790069R	RES.CHIP 1/16W 270K OHM
R0C2	0790046R	RES.CHIP 1/16W 4.7K OHM	R0M2	0790037R	RES.CHIP 1/16W 1.0K OHM
R0C3	0790058R	RES.CHIP 1/16W 39K OHM	R0M3	0790037R	RES.CHIP 1/16W 1.0K OHM
R0C4	0790059R	RES.CHIP 1/16W 47K OHM	R0M7	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
R0C5	0790037R	RES.CHIP 1/16W 1.0K OHM	R0M8	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
R0C6	0790051R	RES.CHIP 1/16W 10K OHM	R0M9	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
R0C7	0790059R	RES.CHIP 1/16W 47K OHM	R0N1	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
R0C8	0790051R	RES.CHIP 1/16W 10K OHM	R0N2	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
R0C9	0790059R	RES.CHIP 1/16W 47K OHM	R0N3	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
R0E2	0790051R	RES.CHIP 1/16W 10K OHM	R100	0790037R	RES.CHIP 1/16W 1.0K OHM

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
R101	0790051R	RES.CHIP 1/16W 10K OHM	R227	0790047R	RES.CHIP 1/16W 5.6K OHM
R102	0790051R	RES.CHIP 1/16W 10K OHM	R228	0790047R	RES.CHIP 1/16W 5.6K OHM
R103	0790037R	RES.CHIP 1/16W 1.0K OHM	R229	0790025R	RES.CHIP 1/16W 120 OHM
R104	0790037R	RES.CHIP 1/16W 1.0K OHM	R230	0790025R	RES.CHIP 1/16W 120 OHM
R105	0790037R	RES.CHIP 1/16W 1.0K OHM	R231	0790037R	RES.CHIP 1/16W 1.0K OHM
R106	0790037R	RES.CHIP 1/16W 1.0K OHM	R232	0196039R	RES 1608 CHIP 1/16W 75J TAPE
R107	0790037R	RES.CHIP 1/16W 1.0K OHM	R233	0196039R	RES 1608 CHIP 1/16W 75J TAPE
R108	0790037R	RES.CHIP 1/16W 1.0K OHM	R234	0196039R	RES 1608 CHIP 1/16W 75J TAPE
R109	0790024R	RES.CHIP 1/16W 100 OHM	R235	0196039R	RES 1608 CHIP 1/16W 75J TAPE
R110	0790024R	RES.CHIP 1/16W 100 OHM	R236	0196039R	RES 1608 CHIP 1/16W 75J TAPE
R112	0790037R	RES.CHIP 1/16W 1.0K OHM	R237	0790047R	RES.CHIP 1/16W 5.6K OHM
R114	0790059R	RES.CHIP 1/16W 47K OHM	R238	0790047R	RES.CHIP 1/16W 5.6K OHM
R115	0790059R	RES.CHIP 1/16W 47K OHM	R239	0790069R	RES.CHIP 1/16W 270K OHM
R116	0100059M	RES.-CARBON FLM 1/8W 560-JB	R240	0790069R	RES.CHIP 1/16W 270K OHM
R117	0790028R	RES.CHIP 1/16W 220 OHM	R241	0790024R	RES.CHIP 1/16W 100 OHM
R118	0790028R	RES.CHIP 1/16W 220 OHM	R242	0790024R	RES.CHIP 1/16W 100 OHM
R120	0790024R	RES.CHIP 1/16W 100 OHM	R243	0196039R	RES 1608 CHIP 1/16W 75J TAPE
R121	0790035R	RES.CHIP 1/16W 680 OHM	R244	0196039R	RES 1608 CHIP 1/16W 75J TAPE
R123	0790037R	RES.CHIP 1/16W 1.0K OHM	R245	0790037R	RES.CHIP 1/16W 1.0K OHM
R125	0790024R	RES.CHIP 1/16W 100 OHM	R246	0790022R	RES.CHIP 1/16W 68 OHM
R127	0100059M	RES.-CARBON FLM 1/8W 560-JB	R247	0790064R	RES.CHIP 1/16W 100K OHM
R128	0790028R	RES.CHIP 1/16W 220 OHM	R248	0790037R	RES.CHIP 1/16W 1.0K OHM
R129	0790028R	RES.CHIP 1/16W 220 OHM	R249	0790037R	RES.CHIP 1/16W 1.0K OHM
R130	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	R250	0790064R	RES.CHIP 1/16W 100K OHM
R131	0790035R	RES.CHIP 1/16W 680 OHM	R251	0790064R	RES.CHIP 1/16W 100K OHM
R136	0790051R	RES.CHIP 1/16W 10K OHM	R256	0790025R	RES.CHIP 1/16W 120 OHM
R137	0790051R	RES.CHIP 1/16W 10K OHM	R259	0790034R	RES.CHIP 1/16W 560 OHM
R138	0790037R	RES.CHIP 1/16W 1.0K OHM	R260	0790034R	RES.CHIP 1/16W 560 OHM
R139	0790037R	RES.CHIP 1/16W 1.0K OHM	R261	0790034R	RES.CHIP 1/16W 560 OHM
R151	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	R268	0790025R	RES.CHIP 1/16W 120 OHM
R201	0790025R	RES.CHIP 1/16W 120 OHM	R269	0790025R	RES.CHIP 1/16W 120 OHM
R202	0790047R	RES.CHIP 1/16W 5.6K OHM	R270	0790047R	RES.CHIP 1/16W 5.6K OHM
R203	0790047R	RES.CHIP 1/16W 5.6K OHM	R271	0790025R	RES.CHIP 1/16W 120 OHM
R204	0196039R	RES 1608 CHIP 1/16W 75J TAPE	R272	0790047R	RES.CHIP 1/16W 5.6K OHM
R205	0790069R	RES.CHIP 1/16W 270K OHM	R277	0790062R	RES.CHIP 1/16W 68K OHM
R206	0790069R	RES.CHIP 1/16W 270K OHM	R278	0790024R	RES.CHIP 1/16W 100 OHM
R207	0790025R	RES.CHIP 1/16W 120 OHM	R279	0790057R	RES.CHIP 1/16W 33K OHM
R208	0790025R	RES.CHIP 1/16W 120 OHM	R280	0790033R	RES.CHIP 1/16W 470 OHM
R209	0196039R	RES 1608 CHIP 1/16W 75J TAPE	R281	0790032R	RES.CHIP 1/16W 390 OHM
R210	0196039R	RES 1608 CHIP 1/16W 75J TAPE	R282	0790033R	RES.CHIP 1/16W 470 OHM
R211	0790037R	RES.CHIP 1/16W 1.0K OHM	R283	0790051R	RES.CHIP 1/16W 10K OHM
R212	0790025R	RES.CHIP 1/16W 120 OHM	R284	0790031R	RES.CHIP 1/16W 330 OHM
R213	0790047R	RES.CHIP 1/16W 5.6K OHM	R285	0790036R	RES.CHIP 1/16W 820 OHM
R214	0790047R	RES.CHIP 1/16W 5.6K OHM	R286	0790061R	RES.CHIP 1/16W 56K OHM
R215	0196039R	RES 1608 CHIP 1/16W 75J TAPE	R287	0790024R	RES.CHIP 1/16W 100 OHM
R216	0790069R	RES.CHIP 1/16W 270K OHM	R288	0790057R	RES.CHIP 1/16W 33K OHM
R217	0790069R	RES.CHIP 1/16W 270K OHM	R289	0790033R	RES.CHIP 1/16W 470 OHM
R218	0790025R	RES.CHIP 1/16W 120 OHM	R290	0790033R	RES.CHIP 1/16W 470 OHM
R219	0790025R	RES.CHIP 1/16W 120 OHM	R291	0790029R	RES.CHIP 1/16W 270 OHM
R220	0196039R	RES 1608 CHIP 1/16W 75J TAPE	R292	0790051R	RES.CHIP 1/16W 10K OHM
R221	0196039R	RES 1608 CHIP 1/16W 75J TAPE	R293	0790031R	RES.CHIP 1/16W 330 OHM
R222	0790037R	RES.CHIP 1/16W 1.0K OHM	R294	0790036R	RES.CHIP 1/16W 820 OHM
R223	0790038R	RES.CHIP 1/16W 1.2K OHM	R295	0790061R	RES.CHIP 1/16W 56K OHM
R224	0790038R	RES.CHIP 1/16W 1.2K OHM	R296	0790057R	RES.CHIP 1/16W 33K OHM
R225	0196039R	RES 1608 CHIP 1/16W 75J TAPE	R297	0790024R	RES.CHIP 1/16W 100 OHM
R226	0790025R	RES.CHIP 1/16W 120 OHM	R298	0790036R	RES.CHIP 1/16W 820 OHM

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
R299	0790057R	RES.CHIP 1/16W 33K OHM	R407	0790042R	RES.CHIP 1/16W 2.2K OHM
R2A1	0790024R	RES.CHIP 1/16W 100 OHM	R408	0790042R	RES.CHIP 1/16W 2.2K OHM
R2A2	0790024R	RES.CHIP 1/16W 100 OHM	R411	0790059R	RES.CHIP 1/16W 47K OHM
R2A3	0790062R	RES.CHIP 1/16W 68K OHM	R412	0790059R	RES.CHIP 1/16W 47K OHM
R2A4	0790062R	RES.CHIP 1/16W 68K OHM	R413	0790064R	RES.CHIP 1/16W 100K OHM
R2A5	0790037R	RES.CHIP 1/16W 1.0K OHM	R414	0790033R	RES.CHIP 1/16W 470 OHM
R2A6	0790037R	RES.CHIP 1/16W 1.0K OHM	R415	0790037R	RES.CHIP 1/16W 1.0K OHM
R2A7	0790024R	RES.CHIP 1/16W 100 OHM	R416	0790055R	RES.CHIP 1/16W 22K OHM
R2A8	0790024R	RES.CHIP 1/16W 100 OHM	R417	AT03197S	METAL OX. 2.2OHM 1W
R2A9	0790024R	RES.CHIP 1/16W 100 OHM	R418	AT03197S	METAL OX. 2.2OHM 1W
R2B1	0790024R	RES.CHIP 1/16W 100 OHM	R419	0790062R	RES.CHIP 1/16W 68K OHM
R2B2	0790024R	RES.CHIP 1/16W 100 OHM	R420	0790062R	RES.CHIP 1/16W 68K OHM
R2B3	0790024R	RES.CHIP 1/16W 100 OHM	R421	AT03871M	1KOHM 1/2W RDS50 CARBON FILM RESISTOR
R2B8	0790037R	RES.CHIP 1/16W 1.0K OHM	R422	AT03871M	1KOHM 1/2W RDS50 CARBON FILM RESISTOR
R2B9	0790037R	RES.CHIP 1/16W 1.0K OHM	R504	0790024R	RES.CHIP 1/16W 100 OHM
R2C1	0790037R	RES.CHIP 1/16W 1.0K OHM	R505	0790024R	RES.CHIP 1/16W 100 OHM
R2C2	0790037R	RES.CHIP 1/16W 1.0K OHM	R506	0790024R	RES.CHIP 1/16W 100 OHM
R2C3	0790057R	RES.CHIP 1/16W 33K OHM	R507	0790024R	RES.CHIP 1/16W 100 OHM
R2C4	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	R508	0790024R	RES.CHIP 1/16W 100 OHM
R2C5	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	R510	0790037R	RES.CHIP 1/16W 1.0K OHM
R2C9	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	R516	0790024R	RES.CHIP 1/16W 100 OHM
R2D1	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	R517	0790024R	RES.CHIP 1/16W 100 OHM
R2D2	0790046R	RES.CHIP 1/16W 4.7K OHM	R523	0790024R	RES.CHIP 1/16W 100 OHM
R2D3	0790037R	RES.CHIP 1/16W 1.0K OHM	R524	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
R2D7	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	R525	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
R2D8	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	R526	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
R2D9	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	R528	0790048R	RES.CHIP 1/16W 6.8K OHM
R2E1	0790059R	RES.CHIP 1/16W 47K OHM	R529	0790024R	RES.CHIP 1/16W 100 OHM
R2E2	0790037R	RES.CHIP 1/16W 1.0K OHM	R530	0790037R	RES.CHIP 1/16W 1.0K OHM
R2E3	0790059R	RES.CHIP 1/16W 47K OHM	R531	0790024R	RES.CHIP 1/16W 100 OHM
R2E4	0790051R	RES.CHIP 1/16W 10K OHM	R532	0790042R	RES.CHIP 1/16W 2.2K OHM
R2E5	0790051R	RES.CHIP 1/16W 10K OHM	R533	0790033R	RES.CHIP 1/16W 470 OHM
R2E6	0790064R	RES.CHIP 1/16W 100K OHM	R534	0790033R	RES.CHIP 1/16W 470 OHM
R2F3	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	R535	0790026R	RES.CHIP 1/16W 150 OHM
R2F4	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	R536	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
R2F5	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	R537	0790041R	RES.CHIP 1/16W 1.8K OHM
R2F6	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	R538	0790045R	RES.CHIP 1/16W 3.9K OHM
R2F7	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	R539	0790024R	RES.CHIP 1/16W 100 OHM
R2F8	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	R540	0790051R	RES.CHIP 1/16W 10K OHM
R2F9	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	R542	0790052R	RES.CHIP 1/16W 12K OHM
R2G1	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	R543	0790051R	RES.CHIP 1/16W 10K OHM
R2G2	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	R544	0790024R	RES.CHIP 1/16W 100 OHM
R2G4	0790048R	RES.CHIP 1/16W 6.8K OHM	R545	0790037R	RES.CHIP 1/16W 1.0K OHM
R2G5	0790056R	RES.CHIP 1/16W 27K OHM	R546	0790024R	RES.CHIP 1/16W 100 OHM
R2G6	0790051R	RES.CHIP 1/16W 10K OHM	R547	0790051R	RES.CHIP 1/16W 10K OHM
R2G7	0790037R	RES.CHIP 1/16W 1.0K OHM	R548	0790037R	RES.CHIP 1/16W 1.0K OHM
R2G8	0790063R	RES.CHIP 1/16W 82K OHM	R549	0790024R	RES.CHIP 1/16W 100 OHM
R2G9	0790028R	RES.CHIP 1/16W 220 OHM	R550	0790049R	RES.CHIP 1/16W 8.2K OHM
R2H1	0790037R	RES.CHIP 1/16W 1.0K OHM	R551	0790024R	RES.CHIP 1/16W 100 OHM
R2H2	0790063R	RES.CHIP 1/16W 82K OHM	R552	0790054R	RES.CHIP 1/16W 18K OHM
R2H3	0790028R	RES.CHIP 1/16W 220 OHM	R554	0790055R	RES.CHIP 1/16W 22K OHM
R361	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	R555	0790042R	RES.CHIP 1/16W 2.2K OHM
R402	0790037R	RES.CHIP 1/16W 1.0K OHM	R556	0790037R	RES.CHIP 1/16W 1.0K OHM
R404	0790037R	RES.CHIP 1/16W 1.0K OHM	R557	0790037R	RES.CHIP 1/16W 1.0K OHM
R405	0790042R	RES.CHIP 1/16W 2.2K OHM	R558	0790028R	RES.CHIP 1/16W 220 OHM
R406	0790042R	RES.CHIP 1/16W 2.2K OHM	R559	0790028R	RES.CHIP 1/16W 220 OHM

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
R646	0700054M	RES.-CARBON FLM 1/16W 10K-JB	R825	0100021M	RES.-CARBON FLM 1/8W 15-JB
R647	0700059M	RES.-CARBON FLM 1/16W 27K-JB	R827	0100065M	RES.-CARBON FLM 1/8W 1K-JB
R648	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	R831	0140326S	RES. WIRE WOUND 5.6K-J 5W
R649	0100053M	RES.-CARBON FLM 1/8W 330-JB	R833	0113744M	RESISTOR CARBON FILM SRD1/2P-B 560-J
R651	AT03859M	150OHM 1/2W RDS50 CARBON FILM RESISTOR	R836	AT03906M	470KOHM 1/2W RDS50 CARBON FILM RESISTOR
R660	AT03857M	100OHM 1/2W RDS50 CARBON FILM RESISTOR	R840	0100051M	RES.-CARBON FLM 1/8W 270-JB
R661	AT03857M	100OHM 1/2W RDS50 CARBON FILM RESISTOR	R841	0100057M	RES.-CARBON FLM 1/8W 470-JB
R671	AT03857M	100OHM 1/2W RDS50 CARBON FILM RESISTOR	R842	0100043M	RES.-CARBON FLM 1/8W 120-JB
R672	AT03879M	4.7KOHM 1/2W RDS50 CARBON FILM RESISTOR	R855	0100021M	RES.-CARBON FLM 1/8W 15-JB
R673	AT03242S	METAL OX. 100OHM 1W	R861	0140326S	RES. WIRE WOUND 5.6K-J 5W
R675	0700061M	RES.-CARBON FLM 1/16W 33K-JB	R863	0113744M	RESISTOR CARBON FILM SRD1/2P-B 560-J
R701	0145051S	RES.-WIRE WOUND 7W 2.7K	R866	AT03906M	470KOHM 1/2W RDS50 CARBON FILM RESISTOR
R704	0100031M	RES.-CARBON FLM 1/8W 39-JB	R870	0100051M	RES.-CARBON FLM 1/8W 270-JB
R705	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB	R871	0100057M	RES.-CARBON FLM 1/8W 470-JB
R706	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB	R872	0100045M	RES.-CARBON FLM 1/8W 150-JB
R707	0100079M	RES.-CARBON FLM 1/8W 3.9K-JB	R885	0100021M	RES.-CARBON FLM 1/8W 15-JB
R708	0700066M	RES.-CARBON FLM 1/16W 82K-JB	R902	0700055M	RES.-CARBON FLM 1/16W 12K-JB
R709	0700054M	RES.-CARBON FLM 1/16W 10K-JB	R903	AT03897M	100KOHM 1/2W RDS50 CARBON FILM RESISTOR
R710	0187068M	RES.-CARBON FLM 1/16W 1.3K-JB	R905	0113772M	RES.-CARBON FLM SRD1/2P-B
R711	0700048M	RES.-CARBON FLM 1/16W 3.9K-JB	R906	0113772M	RES.-CARBON FLM SRD1/2P-B
R712	0700053M	RES.-CARBON FLM 1/16W 8.2K-JB	R907	0100035M	RES.-CARBON FLM 1/8W 56-JB
R713	AT03858M	120OHM 1/2W RDS50 CARBON FILM RESISTOR	R909	0700038M	RES.-CARBON FLM 1/16W 680-JB
R714	AT03219S	METAL OX. 15.0OHM 1W	R910	AT03672M	RES.MTL GRAZD FLM 1/2W 3.3M
⚠ R715	0700062M	RES.-CARBON FLM 1/16W 39K-JB	R911	0700045M	RES.-CARBON FLM 1/16W 2.2K-JB
⚠ R716	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB	R912	0140955M	RES.MTL FLM 1/2W 220K-JB
R717	0113719M	RESISTOR CARBON FILM SRD1/2P-B 56-J	R914	0700027M	RES.-CARBON FLM 1/16W 100-JB
R718	AT03889M	27KOHM 1/2W RDS50 CARBON FILM RESISTOR	R915	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R719	AT03893M	47KOHM 1/2W RDS50 CARBON FILM RESISTOR	R917	AT01534S	METAL FILM 0.22OHM 1/2W
R720	AT03411S	METAL OX. 220OHM 2W	R918	AT01531S	METAL FILM RESISTOR(0.1OHM1/2W)
R727	0100089M	RES.-CARBON FLM 1/8W 10K-JB	R919	AT01531S	METAL FILM RESISTOR(0.1OHM1/2W)
R728	0100077M	RES.-CARBON FLM 1/8W 3.3K-JB	R922	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R729	AT03865M	390OHM 1/2W RDS50 CARBON FILM RESISTOR	R923	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R730	0700054M	RES.-CARBON FLM 1/16W 10K-JB	R925	0700045M	RES.-CARBON FLM 1/16W 2.2K-JB
R731	0100127M	RES.-CARBON FLM 1/8W 390K-JB	R926	0700059M	RES.-CARBON FLM 1/16W 27K-JB
R732	AT03251S	METAL OX. 220OHM 1W	R927	0700059M	RES.-CARBON FLM 1/16W 27K-JB
R733	AT03251S	METAL OX. 220OHM 1W	R928	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB
R734	0100127M	RES.-CARBON FLM 1/8W 390K-JB	R929	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB
R740	0700065M	RES.-CARBON FLM 1/16W 68K-JB	R930	0700056M	RES.-CARBON FLM 1/16W 15K-JB
R750	0113733M	RES.CARBON FLM SRD1/2P-B 220-J	R931	0119695M	RES.-MTL OXIDE FLM 1W 0.47-F
R751	0100093M	RES.-CARBON FLM 1/8W 15K-JB	R932	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R752	0700036M	RES.-CARBON FLM 1/16W 470-JB	R933	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R753	AT03448S	METAL OX. 5.6KOHM 2W	R934	0113797M	RES.-CARBON FLM 1/2W 82K-JB
R761	AT03881M	5.6KOHM 1/2W RDS50 CARBON FILM RESISTOR	R935	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB
R762	AT03408S	METAL OX. 180OHM 2W	R938	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R801	0140326S	RES. WIRE WOUND 5.6K-J 5W	R939	0700058M	RES.-CARBON FLM 1/16W 22K-JB
R803	0113744M	RESISTOR CARBON FILM SRD1/2P-B 560-J	R940	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB
R806	AT03906M	470KOHM 1/2W RDS50 CARBON FILM RESISTOR	R941	0700054M	RES.-CARBON FLM 1/16W 10K-JB
R810	0100051M	RES.-CARBON FLM 1/8W 270-JB	R942	0700043M	RES.-CARBON FLM 1/16W 1.5K-JB
R811	0100057M	RES.-CARBON FLM 1/8W 470-JB	R943	0700039M	RES.-CARBON FLM 1/16W 820-JB
R812	0100045M	RES.-CARBON FLM 1/8W 150-JB	R944	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB
R815	0100063M	RES.-CARBON FLM 1/8W 820-JB	R946	0700022M	RES.-CARBON FLM 1/16W 39-J
R817	0100041M	RES.-CARBON FLM 1/8W 100-JB	R947	0700029M	RES.-CARBON FLM 1/16W 150-JB
R818	0100049M	RES.-CARBON FLM 1/8W 220-JB	R948	0700043M	RES.-CARBON FLM 1/16W 1.5K-JB
R821	0100063M	RES.-CARBON FLM 1/8W 820-JB	R952	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
R822	0100049M	RES.-CARBON FLM 1/8W 220-JB	R961	AT03905M	390KOHM 1/2W RDS50 CARBON FILM RESISTOR
R823	0100065M	RES.-CARBON FLM 1/8W 1K-JB	R964	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
R965	0700052M	RES.-CARBON FLM 1/16W 6.8K-JB	RE04	0700035M	RES.-CARBON FLM 1/16W 390-JB
R966	0700053M	RES.-CARBON FLM 1/16W 8.2K-JB	RE05	0700042M	RES.-CARBON FLM 1/16W 1.2K-JB
R967	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB	RE06	0700031M	RES.-CARBON FLM 1/16W 180-JB
R975	AT03419S	METAL OX. 470 OHM 2W	RE07	0700065M	RES.-CARBON FLM 1/16W 68K-JB
R977	0700063M	RES.-CARBON FLM 1/16W 47K-JB	RE08	0700059M	RES.-CARBON FLM 1/16W 27K-JB
R979	AT03608S	METAL OX. 5.6KOHM 3W	RE09	0700039M	RES.-CARBON FLM 1/16W 820-JB
R980	0700037M	RES.-CARBON FLM 1/16W 560-JB	RE10	0700033M	RES.-CARBON FLM 1/16W 270-JB
R982	0700058M	RES.-CARBON FLM 1/16W 22K-JB	RE11	0700033M	RES.-CARBON FLM 1/16W 270-JB
R985	0700045M	RES.-CARBON FLM 1/16W 2.2K-JB	RE12	0700045M	RES.-CARBON FLM 1/16W 2.2K-JB
R986	0140964M	RES.-METAL FLM 1/2W 1.0M-J	RE13	0700058M	RES.-CARBON FLM 1/16W 22K-JB
R9A1	0140955M	RES.MTL FLM 1/2W 220K-JB	RE14	0700067M	RES.-CARBON FLM 1/16W 100K-JB
R9A2	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RE15	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB
R9A3	0700051M	RES.-CARBON FLM 1/16W 5.6K-JB	RE16	0113742M	RES.-CARBON FLM 1/2W 470-JB
RA01	0790024R	RES.CHIP 1/16W 100 OHM	RE18	0700036M	RES.-CARBON FLM 1/16W 470-JB
RA02	0790024R	RES.CHIP 1/16W 100 OHM	RE19	0700067M	RES.-CARBON FLM 1/16W 100K-JB
RA32	0790058R	RES.CHIP 1/16W 39K OHM	RE20	0700054M	RES.-CARBON FLM 1/16W 10K-JB
RA33	0790024R	RES.CHIP 1/16W 100 OHM	RE21	0100065M	RES.-CARBON FLM 1/8W 1K-JB
RA34	0790052R	RES.CHIP 1/16W 12K OHM	RE22	0700027M	RES.-CARBON FLM 1/16W 100-JB
RA35	0790037R	RES.CHIP 1/16W 1.0K OHM	RE23	0113701M	RESISTOR CARBON FILM SRD1/2P-B 10-J
RA36	0790037R	RES.CHIP 1/16W 1.0K OHM	RE24	0100039M	RES.-CARBON FLM 1/8W 82-JB
RA37	0790031R	RES.CHIP 1/16W 330 OHM	RE25	AT03873M	1.5KOHM 1/2W RDS50 CARBON FILM RESISTOR
RA38	0790028R	RES.CHIP 1/16W 220 OHM	RE26	AT03872M	1.2KOHM 1/2W RDS50 CARBON FILM RESISTOR
RA39	0790063R	RES.CHIP 1/16W 82K OHM	RE27	AT03895M	68KOHM 1/2W RDS50 CARBON FILM RESISTOR
RA40	0790037R	RES.CHIP 1/16W 1.0K OHM	RE28	AT03895M	68KOHM 1/2W RDS50 CARBON FILM RESISTOR
RA41	0790064R	RES.CHIP 1/16W 100K OHM	RE29	0113776M	RESISTOR CARBON FILM SRD1/2P-B 12K-J
RA42	0790058R	RES.CHIP 1/16W 39K OHM	RE30	0100039M	RES.-CARBON FLM 1/8W 82-JB
RA43	0790024R	RES.CHIP 1/16W 100 OHM	RE31	0100069M	RES.-CARBON FLM 1/8W 1.5K-JB
RA44	0790052R	RES.CHIP 1/16W 12K OHM	RE32	0100067M	RES.-CARBON FLM 1/8W 1.2K-JB
RA45	0790037R	RES.CHIP 1/16W 1.0K OHM	RE33	0113704M	RESISTOR CARBON FILM SRD1/2P-B 13-J
RA46	0790037R	RES.CHIP 1/16W 1.0K OHM	RE34	AT03571S	METAL OX. 220OHM 3W
RA47	0790031R	RES.CHIP 1/16W 330 OHM	RE35	0113686M	RES.-CARBON FLM 1/2W 2.7-J
RA48	0790028R	RES.CHIP 1/16W 220 OHM	RE36	0113686M	RES.-CARBON FLM 1/2W 2.7-J
RA49	0790063R	RES.CHIP 1/16W 82K OHM	RE37	0113704M	RESISTOR CARBON FILM SRD1/2P-B 13-J
RA50	0790037R	RES.CHIP 1/16W 1.0K OHM	RE38	AT03254S	METAL OX. 300OHM 1W
RA51	0790064R	RES.CHIP 1/16W 100K OHM	RE39	0700054M	RES.-CARBON FLM 1/16W 10K-JB
RA52	0790037R	RES.CHIP 1/16W 1.0K OHM	RE40	0700037M	RES.-CARBON FLM 1/16W 560-JB
RA53	0790037R	RES.CHIP 1/16W 1.0K OHM	RE41	0700035M	RES.-CARBON FLM 1/16W 390-JB
RA63	0790059R	RES.CHIP 1/16W 47K OHM	RE43	0700039M	RES.-CARBON FLM 1/16W 820-JB
RA64	0790055R	RES.CHIP 1/16W 22K OHM	RE45	0700027M	RES.-CARBON FLM 1/16W 100-JB
RA65	0790051R	RES.CHIP 1/16W 10K OHM	RE46	0113746M	RES.-CARBON FLM 1/2W 680-JB
RA66	0790051R	RES.CHIP 1/16W 10K OHM	RE47	0700054M	RES.-CARBON FLM 1/16W 10K-JB
RA67	0790055R	RES.CHIP 1/16W 22K OHM	RF01	0700058M	RES.-CARBON FLM 1/16W 22K-JB
RA68	0790059R	RES.CHIP 1/16W 47K OHM	RF02	0700059M	RES.-CARBON FLM 1/16W 27K-JB
RA69	0790059R	RES.CHIP 1/16W 47K OHM	RF03	0700036M	RES.-CARBON FLM 1/16W 470-JB
RA70	0790061R	RES.CHIP 1/16W 56K OHM	RF04	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB
RA75	0147152	RES.-WIRE WOUND 3W 27-JA CEMENTED	RF07	0100113M	RES.-CARBON FLM 1/8W 100K-JB
RA77	0790037R	RES.CHIP 1/16W 1.0K OHM	RF08	0700058M	RES.-CARBON FLM 1/16W 22K-JB
RA78	0790037R	RES.CHIP 1/16W 1.0K OHM	RF09	0700054M	RES.-CARBON FLM 1/16W 10K-JB
RAC3	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	RF10	AT03857M	100OHM 1/2W RDS50 CARBON FILM RESISTOR
RAE6	0790055R	RES.CHIP 1/16W 22K OHM	RF11	0700045M	RES.-CARBON FLM 1/16W 2.2K-JB
RAE7	0790055R	RES.CHIP 1/16W 22K OHM	RF12	0100113M	RES.-CARBON FLM 1/8W 100K-JB
RAJ2	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	RF13	0700056M	RES.-CARBON FLM 1/16W 15K-JB
RAJ3	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	RF14	0700025M	RES.-CARBON FLM 1/16W 68-J
RE01	AT03584S	METAL OX. 680OHM 3W	RF15	AT03659M	RES.MTL GRAZD FLM 1/2W 390K
RE02	0700066M	RES.-CARBON FLM 1/16W 82K-JB	RF16	AT03659M	RES.MTL GRAZD FLM 1/2W 390K
RE03	0700057M	RES.-CARBON FLM 1/16W 18K-JB	RF17	AT03659M	RES.MTL GRAZD FLM 1/2W 390K

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RF18	AT03662M	RES.MTL GRAZD FLM 1/2W 560K	RG54	0790051R	RES.CHIP 1/16W 10K OHM
RF19	AT03662M	RES.MTL GRAZD FLM 1/2W 560K	RG61	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
RF20	0700027M	RES.-CARBON FLM 1/16W 100-JB	RG63	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
RF21	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB	RG64	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
RF22	0700057M	RES.-CARBON FLM 1/16W 18K-JB	RG65	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
RF23	0700063M	RES.-CARBON FLM 1/16W 47K-JB	RG66	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
RF25	AT03662M	RES.MTL GRAZD FLM 1/2W 560K	RG67	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
RF26	AT03662M	RES.MTL GRAZD FLM 1/2W 560K	RG92	0790042R	RES.CHIP 1/16W 2.2K OHM
RF27	AT03661M	RES.MTL GRAZD FLM 1/2W 470K	RG93	0790037R	RES.CHIP 1/16W 1.0K OHM
RF28	0700061M	RES.-CARBON FLM 1/16W 33K-JB	RG94	0790037R	RES.CHIP 1/16W 1.0K OHM
RF29	0700043M	RES.-CARBON FLM 1/16W 1.5K-JB	RG95	0790037R	RES.CHIP 1/16W 1.0K OHM
RF30	AT03892M	39KOHM 1/2W RDS50 CARBON FILM RESISTOR	RG96	0790037R	RES.CHIP 1/16W 1.0K OHM
RF31	0700053M	RES.-CARBON FLM 1/16W 8.2K-JB	RG97	0790024R	RES.CHIP 1/16W 100 OHM
RF32	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RG98	0790034R	RES.CHIP 1/16W 560 OHM
RF34	0700045M	RES.-CARBON FLM 1/16W 2.2K-JB	RG99	0790066R	RES.CHIP 1/16W 150K OHM
RF36	AT03857M	100OHM 1/2W RDS50 CARBON FILM RESISTOR	RGA1	0790033R	RES.CHIP 1/16W 470 OHM
RF41	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB	RGA2	0790051R	RES.CHIP 1/16W 10K OHM
RF41	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RGA3	0790029R	RES.CHIP 1/16W 270 OHM
RF42	0700053M	RES.-CARBON FLM 1/16W 8.2K-JB	RGA4	0790039R	RES.CHIP 1/16W 1.5K OHM
RF42	0187100M	RES.-CARBON FLM 1/16W 30K-JB	RGA5	0790051R	RES.CHIP 1/16W 10K OHM
RF43	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RGA6	0790045R	RES.CHIP 1/16W 3.9K OHM
RF43	0187074M	RES.-CARBON FLM 1/16W 2.4K-JB	RGA7	0790043R	RES.CHIP 1/16W 2.7K OHM
RF44	0700061M	RES.-CARBON FLM 1/16W 33K-JB	RGA8	0790041R	RES.CHIP 1/16W 1.8K OHM
RF45	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB	RGA9	0790052R	RES.CHIP 1/16W 12K OHM
RF45	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RGC1	0790051R	RES.CHIP 1/16W 10K OHM
RF46	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RGC2	0790045R	RES.CHIP 1/16W 3.9K OHM
RF46	0700039M	RES.-CARBON FLM 1/16W 820-JB	RGC3	0790043R	RES.CHIP 1/16W 2.7K OHM
RF47	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RGC4	0790043R	RES.CHIP 1/16W 2.7K OHM
RF49	AT03248S	METAL OX. 180OHM 1W	RGC5	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
RG01	0790037R	RES.CHIP 1/16W 1.0K OHM	RGE2	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
RG02	0790037R	RES.CHIP 1/16W 1.0K OHM	RK01	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB
RG03	0790037R	RES.CHIP 1/16W 1.0K OHM	RK02	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB
RG04	0790037R	RES.CHIP 1/16W 1.0K OHM	RK03	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB
RG05	0790029R	RES.CHIP 1/16W 270 OHM	RK04	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB
RG06	0790029R	RES.CHIP 1/16W 270 OHM	RK05	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB
RG07	0790029R	RES.CHIP 1/16W 270 OHM	RK06	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB
RG08	0790039R	RES.CHIP 1/16W 1.5K OHM	RK07	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB
RG09	0790041R	RES.CHIP 1/16W 1.8K OHM	RK08	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB
RG10	0790041R	RES.CHIP 1/16W 1.8K OHM	RK09	0100057M	RES.-CARBON FLM 1/8W 470-JB
RG11	0790041R	RES.CHIP 1/16W 1.8K OHM	RK10	0700042M	RES.-CARBON FLM 1/16W 1.2K-JB
RG31	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	RK12	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RG32	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	RK13	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RG33	0790024R	RES.CHIP 1/16W 100 OHM	RK14	0700052M	RES.-CARBON FLM 1/16W 6.8K-JB
RG34	0790024R	RES.CHIP 1/16W 100 OHM	RK15	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB
RG35	0790024R	RES.CHIP 1/16W 100 OHM	RK16	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB
RG36	0790024R	RES.CHIP 1/16W 100 OHM	RK17	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB
RG37	0790024R	RES.CHIP 1/16W 100 OHM	RK18	0700048M	RES.-CARBON FLM 1/16W 3.9K-JB
RG38	0790024R	RES.CHIP 1/16W 100 OHM	RK19	0100125M	RES.-CARBON FLM 1/8W 330K-JB
RG39	0790024R	RES.CHIP 1/16W 100 OHM	RK22	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RG40	0790031R	RES.CHIP 1/16W 330 OHM	RK23	0700052M	RES.-CARBON FLM 1/16W 6.8K-JB
RG41	0790024R	RES.CHIP 1/16W 100 OHM	RK24	0700043M	RES.-CARBON FLM 1/16W 1.5K-JB
RG42	0790024R	RES.CHIP 1/16W 100 OHM	RK25	0700063M	RES.-CARBON FLM 1/16W 47K-JB
RG43	0790024R	RES.CHIP 1/16W 100 OHM	RK26	0700063M	RES.-CARBON FLM 1/16W 47K-JB
RG46	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	RK27	0700054M	RES.-CARBON FLM 1/16W 10K-JB
RG47	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	RK28	0700027M	RES.-CARBON FLM 1/16W 100-JB
RG53	0790042R	RES.CHIP 1/16W 2.2K OHM	RK29	0700027M	RES.-CARBON FLM 1/16W 100-JB

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
RK30	0700027M	RES.-CARBON FLM 1/16W 100-JB	RM29	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RK31	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RM30	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RK32	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RM31	0100041M	RES.-CARBON FLM 1/8W 100-JB
RK33	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RM35	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RK34	0700063M	RES.-CARBON FLM 1/16W 47K-JB	RM38	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RK35	0700063M	RES.-CARBON FLM 1/16W 47K-JB	RM40	0700067M	RES.-CARBON FLM 1/16W 100K-JB
RK36	0700063M	RES.-CARBON FLM 1/16W 47K-JB	RM41	0700032M	RES.-CARBON FLM 1/16W 220-JB
RK37	0700063M	RES.-CARBON FLM 1/16W 47K-JB	RM42	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB
RK38	0700063M	RES.-CARBON FLM 1/16W 47K-JB	RM43	0700059M	RES.-CARBON FLM 1/16W 27K-JB
RK39	0700063M	RES.-CARBON FLM 1/16W 47K-JB	RP01	AT03672M	RES.MTL GRAZD FLM 1/2W 3.3M
RK40	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB	RP02	0147060	RES.-WIRE WOUND 2W 33-K
RK42	AT03199S	METAL OX. 2.7OHM 1W	RP03	0147802	RES.-WIRE WOUND 15W 0.62-KM
RK43	AT03411S	METAL OX. 220OHM 2W	RX01	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
RK44	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB	RX02	0790036R	RES.CHIP 1/16W 820 OHM
RK46	AT03197S	METAL OX. 2.2OHM 1W	RX03	0790024R	RES.CHIP 1/16W 100 OHM
RK47	AT03406S	METAL OX. 150OHM 2W	RX04	0790051R	RES.CHIP 1/16W 10K OHM
RK48	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB	RX05	0790036R	RES.CHIP 1/16W 820 OHM
RK50	AT03202S	METAL OX. 3.3OHM 1W	RX06	0790031R	RES.CHIP 1/16W 330 OHM
RK51	AT03411S	METAL OX. 220OHM 2W	RX07	0790033R	RES.CHIP 1/16W 470 OHM
RK52	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB	RX08	0790056R	RES.CHIP 1/16W 27K OHM
RK54	AT03197S	METAL OX. 2.2OHM 1W	RX09	0790051R	RES.CHIP 1/16W 10K OHM
RK55	AT03406S	METAL OX. 150OHM 2W	RX10	0790037R	RES.CHIP 1/16W 1.0K OHM
RK56	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB	RX11	0790045R	RES.CHIP 1/16W 3.9K OHM
RK58	AT03204S	METAL OX. 3.9OHM 1W	RX12	0790037R	RES.CHIP 1/16W 1.0K OHM
RK59	AT03411S	METAL OX. 220OHM 2W	RX13	0790036R	RES.CHIP 1/16W 820 OHM
RK60	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB	RX14	0790024R	RES.CHIP 1/16W 100 OHM
RK62	AT03202S	METAL OX. 3.3OHM 1W	RX15	0790036R	RES.CHIP 1/16W 820 OHM
RK63	AT03406S	METAL OX. 150OHM 2W	RX16	0790024R	RES.CHIP 1/16W 100 OHM
RK64	0700063M	RES.-CARBON FLM 1/16W 47K-JB	RX17	0790051R	RES.CHIP 1/16W 10K OHM
RK90	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RX18	0790035R	RES.CHIP 1/16W 680 OHM
RK97	AT03193S	METAL OX. 1.5OHM 1W	RX19	0196058R	RES 1608 CHIP 1/16W 430J TAPE
RK99	0113698M	RES.-CARBON FLM 1/2W 8.2-J	RX20	0790056R	RES.CHIP 1/16W 27K OHM
RM01	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RX21	0790033R	RES.CHIP 1/16W 470 OHM
RM02	0700058M	RES.-CARBON FLM 1/16W 22K-JB	RX22	0790037R	RES.CHIP 1/16W 1.0K OHM
RM03	0700045M	RES.-CARBON FLM 1/16W 2.2K-JB	RX23	0790045R	RES.CHIP 1/16W 3.9K OHM
RM04	0100065M	RES.-CARBON FLM 1/8W 1K-JB	RX24	0790037R	RES.CHIP 1/16W 1.0K OHM
RM05	0100065M	RES.-CARBON FLM 1/8W 1K-JB	RX25	0790036R	RES.CHIP 1/16W 820 OHM
RM06	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RX26	0790061R	RES.CHIP 1/16W 56K OHM
RM07	0700043M	RES.-CARBON FLM 1/16W 1.5K-JB	RX27	0790024R	RES.CHIP 1/16W 100 OHM
RM08	0700046M	RES.-CARBON FLM 1/16W 2.7K-JB	RX28	0790036R	RES.CHIP 1/16W 820 OHM
RM09	0700049M	RES.-CARBON FLM 1/16W 4.7K-JB	RX30	0790036R	RES.CHIP 1/16W 820 OHM
RM10	0100129M	RES.-CARBON FLM 1/8W 470K-JB	RX31	0790024R	RES.CHIP 1/16W 100 OHM
RM11	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RX32	0196064R	RES.-1608CHIP 1/16W 750-J TAPE
RM12	0100125M	RES.-CARBON FLM 1/8W 330K-JB	RX33	0196064R	RES.-1608CHIP 1/16W 750-J TAPE
RM13	AT03871M	1KOHM 1/2W RDS50 CARBON FILM RESISTOR	RX34	0790033R	RES.CHIP 1/16W 470 OHM
RM14	0100125M	RES.-CARBON FLM 1/8W 330K-JB	RX35	0790036R	RES.CHIP 1/16W 820 OHM
RM15	0700054M	RES.-CARBON FLM 1/16W 10K-JB	RX36	0790024R	RES.CHIP 1/16W 100 OHM
RM20	0100041M	RES.-CARBON FLM 1/8W 100-JB	RX37	0790056R	RES.CHIP 1/16W 27K OHM
RM21	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RX38	0790064R	RES.CHIP 1/16W 100K OHM
RM22	0700041M	RES.-CARBON FLM 1/16W 1.0K-JB	RX70	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
RM23	0700064M	RES.-CARBON FLM 1/16W 56K-JB	RX71	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
RM24	0700045M	RES.-CARBON FLM 1/16W 2.2K-JB	RX76	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
RM25	0100123M	RES.-CARBON FLM 1/8W 270K-JB	RX77	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
RM26	0700047M	RES.-CARBON FLM 1/16W 3.3K-JB	RX78	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608
RM27	0700064M	RES.-CARBON FLM 1/16W 56K-JB	RX80	0790037R	RES.CHIP 1/16W 1.0K OHM
RM28	0100123M	RES.-CARBON FLM 1/8W 270K-JB			

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SYMBOL NO.	PART NO.	PART DESCRIPTION
		SWITCHES
⚠ S901	FJ00142	RELAY ALKS329
SA01	FD00041	SLIDE SWITCH
SK01	FE10332R	SWITCH (TYPE SWP01N01TKSH0636BT)
SM01	FE00001R	PUSH SWITCH (43/50GX ONLY)
SM01	FE00061	1P TACT SWITCH (50/60DX ONLY)
SM02	FE00001R	PUSH SWITCH (43/50GX ONLY)
SM02	FE00061	1P TACT SWITCH (50/60DX ONLY)
SM03	FE00001R	PUSH SWITCH (43/50GX ONLY)
SM03	FE00061	1P TACT SWITCH (50/60DX ONLY)
SM04	FE00001R	PUSH SWITCH (43/50GX ONLY)
SM04	FE00061	1P TACT SWITCH (50/60DX ONLY)
SM05	FE00001R	PUSH SWITCH (43/50GX ONLY)
SM05	FE00061	1P TACT SWITCH (50/60DX ONLY)
SM06	FE00001R	PUSH SWITCH (43/50GX ONLY)
SM06	FE00061	1P TACT SWITCH (50/60DX ONLY)
SM07	FE00001R	PUSH SWITCH (43/50GX ONLY)
SM07	FE00061	1P TACT SWITCH (50/60DX ONLY)
SM09	FE10332R	SWITCH (TYPE SWP01N01TKSH0636BT)
		TRANSFORMERS
⚠ T701	2260291U	HORIZONTAL DRIVE TRANS.
⚠ T702	BW00632	HFL1735YP-RC
⚠ T703	2272762	TRANS.-SATURBLE
⚠ T901	BT01861	SWITCHING TRANSFORMER EE49F--US-HP1X
⚠ T902	BT01871	SWITCHING TRANSFORMER EE19F--US-HP1X
		TUNERS
U101	HC00511	ENGE6106D(FRONT-END)
U102	HC00462	ENG36614G(FRONT-END)
		DCU UNIT
UKDG	CS00441	DIGITAL CONVERGENCE UNIT HC2141
		CRYSTAL
X001	2163971	CERAMIC FILTER 4MHZ
X501	2791501	CRYSTAL HC-49/U
X502	2168771	X'TAL(TYPE CSB503F30)
XG02	BP01171	CRYSTAL UNIT 20.25MHZ
XG04	2786683	CERAMIC OSCILLATOR CSB 500F9
XP01	AJ00322	ENC271D-14A
		MISCELLANEOUS
#	UE08871	D78-LTG LENS CRT B.ASY(R) (50/60DX)
#	UE08872	D78-LTG LENS CRT B.ASY(G) (50/60DX)
#	UE08873	D78-LTG LENS CRT B.ASY(B) (50/60DX)
#	NT01406	50GX FRAME ASY
#	UE08941	43GX10B CORE B.ASY
#	UE07781	CPD-LTG 43 LC B.ASY(R)
#	UE07782	CPD-LTG 43 LC B.ASY(G)
#	UE07783	CPD-LTG 43 LC B.ASY(B)
#	UE08954	CPC-LFM 61 LC B.ASY(R) (50GX)
#	UE08955	CPC-LFM 61 LC B.ASY(G) (50GX)
#	UE08956	CPC-LFM 61 LC B.ASY(B) (50GX)
#	QD21471	43GX10B CABINET ASY
#	QG01191	43GX** REAR COVER ASY
# 98	MN03622	BACK COVER SPACER 3.3 (60DX)
# 99	MN03621	BACK COVER SPACER 5.3 (60DX)
#002	QG00812	REAR COVER ASY (50DX/GX)
#005	NA11704	LENS CRT METAL 50/60DX
#005	NA48901	LENS/CRT METAL 43GX
#011	UE08871	D78-LTG LENS CRT B.ASY(R) (50/60DX)
#011	UE07781	CPD-LTG 43GX LC B.ASY(R)
#011	UE08954	CPC-LFM 61 LC B.ASY(R) (50GX)
#011L	LUE0887	D78-LTG LENS C.B.ASY (50/60DX)
#011L	LUE0778	CPD-LTG 43GX LC B.ASY
#011L	LUE0895	CPC-LFM 53/61 LC B.ASY (50GX)
#012	UE08872	D78-LTG LENS CRT B.ASY(G) (50/60DX)
#012	UE07782	CPD-LTG 43GX LC B.ASY(G)
#012	UE08955	CPC-LFM 61 LC B.ASY(G) (50GX)
#012	KR01461	43GX** SCREEN ASY
#012L	LUE0887	D78-LTG LENS C.B.ASY (50/60DX)
#012L	LUE0778	CPD-LTG 43GX LC B.ASY
#012L	LUE0895	CPC-LFM 53/61 LC B.ASY (50GX)
#012L	LKR0146	43GX** SCREEN ASY
#013	KR01223	SCREEN ASS'Y (60DX)
#013	UE08873	D78-LTG LENS CRT B.ASY(B) (50/60DX)
#013	UE07783	CPD-LTG 43GX LC B.ASY(B)
#013	UE08956	CPC-LFM 61 LC B.ASY(B) (50GX)
#013L	LKR0122	SCREEN ASY (60DX)
#013L	LUE0887	D78-LTG LENS C.B.ASY (50/60DX)
#013L	LUE0778	CPD-LTG 43GX LC B.ASY
#013L	LUE0895	CPC-LFM 53/61 LC B.ASY (50GX)
#014	KR01221	SCREEN ASS'Y (50DX)
#014L	LKR0122	SCREEN ASY (50DX)
#016	KR00276	50GX SCREEN ASY
#016L	LKR0027	50GX SCREEN ASS'Y
#017	NA45881	FRAME HOLDER
#018	NA47422	43" GRIP METAL
#021	QG00812	50DX REAR COVER ASY
#021	QG01191	43GX** REAR COVER ASY
#021	QG00812	50GX REAR COVER ASY
#021L	LQG0081	50DX REAR COVER AS'Y
#021L	LQG0119	43GX** R.COVER ASY
#021L	LQG0081	50GX REAR COVER AS'Y
#022	QG00832	60DX REAR COVER ASSY
#022L	LQG0083	60DX REAR COVER ASSEMBLY
#031	NT01694	50DX FRAME ASSY
#031	NT01682	43FDX10B FRAME ASY
#031	NT01406	50GX FRAME ASY
#031L	LNT0169	50DX FRAME ASSY
#031L	LNT0168	43GX** FRAME ASY
#031L	LNT0140	50GX FRAME ASY
#032	NT01693	60DX FRAME ASSY
#032L	LNT0169	60DX FRAME ASSY
#041	QD21461	50DX CABINET ASS'Y
#041	QD21471	43GX CABINET ASS'Y
#041	QD22151	50GX CABINET ASSY
#041L	LQD2146	50/60DX CABINET ASY
#041L	LQD2147	43GX10B CABINET ASY
#041L	LQD2215	50GX CABINET ASY
#042	QD21462	60DX CABINET ASS'Y
#042L	LQD2146	60DX CABINET ASY
#10	PH08444	DECO FRAME (BUILT-IN) (50DX)
#10	QD04113	60" BACK COVER (60DX)
#10	QD03843	Y2K BACK COVER NON LOGO (50DX/GX)
#10	QD08992	43" BACK COVER

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
#10	QD08982	43GX FRAME	#415	32110082	SPEAKER GRILL ASSY 50DX
#110	H311513	CONTROL PANEL BOX (W/B) (43/50GX)	#416	32110073	SPEAKER GRILL ASSY 60DX
#110	H312121	EXTRUDED RETAINER (50/60DX)	#417	H512281	LOWER REAR BOARD 50DX
#110A	PH02582	CONTROL PANEL (50/60DX)	#418	H512282	LOWER REAR BOARD 60DX
#111	33010381	BARRIER BOARD 43"	#420	H320001	PCB SUPPORT SPACER
#111A	NA49721	BARRIER SUPPORT METAL RIGHT 43"	#428	3727972	POWER CORD HANGER
#111B	NA49722	BARRIER SUPPORT METAL LEFT 43"	#428	3727972	POWER CORD HANGER 43/50GX
#112	55010199	FRONT DOOR 50GX	#432	H512281	LOWER REAR BOARD 50GX
#113	33200072	BACK CENTER BAR 50"	#45	NA47441	CENTRAL METAL RIGHT 43"
#114	55020076	FRONT DOOR ASSY 43"	#451	PH08304	SPEAKER GRILL 43"
#12	H311405	50GX DECO FRAME (GX)	#452	32110081	SPEAKER GRILL ASSY 50GX
#120	H312124	EXTRUDED RETAINER (TOP) (50DX)	#453	4621688	SEALING CUSHION 43"
#120D	PH08425	CONTROL PANEL ASSY (50/60DX)	#46	H311436	50GX FRAME CORNER (LT) PAINTED
#120F	PH09652	CONTROL PANEL ASSY (43GX)	#470	61010109	COUNTER WEIGHT (43GX)
#120G	PH09654	CONTROL PANEL SUB ASSY (50GX)	#50	MQ00313	RUBBER SPACER(SIDE) (50DX/GX)
#125	H312124	IMPROVED EXTRUDED RETAINER (TOP) (60DX)	#500	55010227	FRONT BOARD (43GX)
#130	H311531	CONTROL DOOR (43/50GX)	#51	PH08451	SCREEN FRAME (V) (50DX)
#130	H420921	L ANGLE METAL (900 MM) (50/60DX)	#51	MQ00313	RUBBER SPACER(SIDE) (60DX)
#131	3821734	CONTROL DOOR (50/60DX)	#510	62010060	VELCRO
#140	H311542	SELECT BUTTONS PAINTED (43GX)	#52	H311454	50GX SCREEN HOLDER
#140	H420691	FOCUS METAL (50/60DX)	#60	H390061	SPECIAL CUSHION
#140A	H311541	SELECT BUTTONS (50GX)	#61	PH08452	SCREEN FRAME (V)(60DX)
#141	PC01201	CONTROL BUTTON (50/60DX)	#71	H311012A	SCREEN HOLDER (50DX)
#15	PH08443	DECO FRAME (BUILT-IN) (60DX)	#76	H311013	SCREEN HOLDER (60DX)
#150	H311522	RC POWER LENS (43/50GX)	#80	H420502	FRAME CORNER BRACKET(50/60DX)
#150	H311141	CABINET WIRE CLAMP (50DX)	#81	KS00167	MIRROR GLASS (60DX)
#151	3204182	R/C LENS AP33(PTV) (50/60DX)	#81	KS00169	MIRROR GLASS (50DX/GX)
#155	3700921	475T LAMP LENZ A (50/60DX)	E10B	GX00511	VMCOIL
#155	H311141	CABINET WIRE CLAMP (60DX)	E10G	GX00511	VMCOIL
#160	PH05747	INDOOR PLATE (50/60DX/43GX)	E10R	GX00511	VMCOIL
#160	4336491	CASTER METAL SECC (20/20E) (60DX)	⚠ E12B	BY01101	DY-V80-7.0SS3.0L AKME
#160	H311141	CABINET WIRE CLAMP	⚠ E12G	BY01101	DY-V80-7.0SS3.0L AKME
#165	PH09283	DOOR PLATE (50/60DX/43GX)	⚠ E12R	BY01101	DY-V80-7.0SS3.0L AKME
#165	QJ00673	FOOT LC52-SV1 (43GX)	E203	FQ00021	DRY BATTERY(R6P-AA)
#170	PU00162	HITACHI BADGE (SILVER) (50/60DX)	E2B	EZ01331	COZ-ANODE COVER ASY
#180	H320001	PCB SUPPORT SPACER (50/60DX)	E2B	EZ00911	COZ-ANODE COVER SP45-S3 (43GX)
#20	NA11681	MIRROR METAL AP7 A (60DX)	E2G	EZ01331	COZ-ANODE COVER ASY
#20	NA11681	MIRROR METAL AP7 A (50DX/GX)	E2G	EZ00911	COZ-ANODE COVER SP45-S3 (43GX)
#20	KS02024	43" MODELS MIRROR GLASS	E2R	EZ01331	COZ-ANODE COVER ASY
#20	NA47171	43GX H. SCREEN METAL	E2R	EZ00911	COZ-ANODE COVER SP45-S3 (43GX)
#21	H311047	SCREEN FRAME CORNER (RT)(50/60DX)	E301	HL01651	RML-CLU-4311UG
#22	QD08752	50GX VERTICAL FRAME	E3B	2958351	CONN. W/WIRE MINI 2J
#245	4621681	50DX SEALING CUSHION	E3G	2958351	CONN. W/WIRE MINI 2J
#246	4621681	60DX SEALING CUSHION	E3R	2958351	CONN. W/WIRE MINI 2J
#26	H311048	SCREEN FRAME CORNER (LT) (50/60DX)	⚠ E801	EY01351	PJX-CVT-3248-1288T
#261	3487427	HITACHI BADGE 55(S) 43"	⚠ E831	EY01351	PJX-CVT-3248-1288T
#30	NA11691	MIRROR METAL AP7 B (50DX/GX)	⚠ E861	EY01351	PJX-CVT-3248-1288T
#30	NA47451	H. MIRROR METAL 43"	E901	EV00854	COD-VM0238AP302GL250
#30	NA47181	43GX V. SCREEN METAL	E901	EV00853	COD-VM0238AP-302GL 43"
#31	H311818	SCREEN FRAME TOP (50DX)	EAN	2974056S	3J CONNE SEH UL1007 L=160
#31	NA11691	MIRROR METAL AP7 B (60DX)	EBG1	2964987	6J RIBBON WIRE W/BOARD IN 390
#32	QD08742	50GX" HORIZONTAL FRAME	EBG2	2966821	4J CONNE. L=300
#380	H420691	FOCUS METAL	ED14	EY00791	PJX-LEAD-PLUGPIN
#40	NA47442	SENTRAL METAL LEFT 43"	ED15	EY00791	PJX-LEAD-PLUGPIN
#41	H311817	SCREEN FRAME TOP (60DX)	ED16	EY00791	PJX-LEAD-PLUGPIN
#41	H311435	50GX FRAME CORNER (RT) PAINTED	ED29	EY00791	PJX-LEAD-PLUGPIN

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
ED73	EY00791	PJX-LEAD-PLUGPIN	N203G	3393754	DELTA 77 C-ELEMENT G (50/60DX)
EDF2	EF05941	4P CONNECTOR (L=1000 N.C#2,3)	N203G	KQ00822	DELTA 38 C-ELEMENT G (43GX)
EFS	2973897S	CONNE. 9P L=1000	N203G	KQ00112K	CPC-1 LENS (G) (50GX)
EFT	2973957S	11J CONNE L=1000	N203R	3393751	DELTA 77 C-ELEMENT (50/60DX)
EP	EF01054	3P CONNECTOR L=410	N203R	KQ00823	DELTA 38 C-ELEMENT R (43GX)
EPD1	EF03844	CO-04C-C3R9-102#3,2N	N203R	KQ00113K	CPC-1 LENS (R) (50GX)
EPS1	EF06332	CO-03C-C5R0-122 LOCK	N211	H462935	EASY GRAPHIC GUIDE HP11/12
ESF	2958151	CONNECTOR RE01X-X3239A901	N301	9483051	COOLANT (GE-55)
ESL	EF05933	CO-05C-F5R0-152#345NC	N304	MA01271	HEAT SINK TC30 H=25 TC-30
ESR	EF05953	CO-04C-F5R0-152#34NC	N401	MA01411	AUDIO HEAT SINK HP/DP1X W80 A1100P-H14
EY1	2908764	CONNE. 6P L=750	N406	3335321	GROUNDING SPRING (50GX)
EY2	2973744S	4J CONNE. L=750	N426	3875441	LEAD CLAMPER (50/60DX)
HM01	CZ00641	GP1U281Q	N500F	KR00276	50GX01B SCREEN ASY (50GX)
J201	ES00283	PIN JACK	N510A	KR01231	FRONT SHEET (50DX)
JA01	ES00211	JACK 2P VERTICAL	N510C	KR01232	FRONT SHEET (60DX)
JA02	ER00851	JACK SP TARMINAL LQR1410	N510F	KR01582	FRONT SHEET AP92R-50 KR (50GX)
JM01	ES00022	3P(SW) PIN JACK WITH S	N510F	KR01235	FRONT SHEET 43"
N001A	MD06211	SIGNAL SHIELD CASE DP06 TC-30	N520A	KR00995	FRESNEL SHEET (50DX)
N001B	MD06222	SHIELD COVER DP06B SPTE T=0.32	N520B	KR01066	FRESNEL SHEET AP53-50 PMMA (50GX)
N001C	MD06222	SHIELD COVER DP06B SPTE T=0.32	N520C	KR00996	FRESNEL SHEET (60DX)
N010	W200026	LCB ASY TESTING SPEC.	N520F	KR00999	FRESNEL SHEET 43"
N101BR	ND00211	D78 BRACKET RB55 (50/60DX)	N530F	KR01295	ULTRA SHIELD 43GX
N101BR	ND00312	CPD BRACKET R/B 43GX	N601	3442081	HEAT SINK (V) A2
N101BR	ND00069	CPD BRACKET RB50-3 (50GX)	N611	3446475	HEAT SINK
N101G	ND00201	AP91 BRACKET G (50/60DX)	N701	3442071	HEAT SINK (H)
N101G	ND00056	CPD BRACKET GREEN (43GX)	NE01	3446473	HEAT SINK H30 P10 SILVER
N101G	ND00056	CPD BRACKET GREEN (50GX)	NH11	PH09971	FBT HOLDER HP/DP PS(UL94V-0)
N111	3810112	HP BELLOWS STAY	NI54	MC00104	HEAT SINK P10 H45 19 A6063S-75
N121	4738241	ORING PRTX	NI55	MC00104	HEAT SINK P10 H45 19 A6063S-75
N121	KX00361	ORING PRTX CPC (50GX)	NI93	MA01271	HEAT SINK TC30 H=25 TC-30
N123	4618771	LENS SEAL P (60/60DX)	NI94	MA01271	HEAT SINK TC30 H=25 TC-30
N123	KX00062	CP LENS SEAL (43/50GX)	NK01	MA01271	HEAT SINK TC30 H=25 TC-30
N125	4621121	BELLOWS R	NK02	MA01271	HEAT SINK TC30 H=25 TC-30
N127	4618311	O RING (P9)	NK05	MC00482	CONVERGENCE HEAT SINK HP12 A6063S-T5
N131	4491961	LENS PLATE(50/60DX)	NK10	3813121	LEAD CLAMPER 2135 PA
N131	NA02922	CPC LENS FIX METAL (43/50GX)	NM71	3816161	HOLDER (S)
N134	4491974	PRT METAL	NM72	NJ01171	LED HOLDER A5WS
N153	MJ01463	PRT SCREW H810223	NP01	2784342	CONDENSER COVER
N154	KL00981	PRT SPRING H830091 (50/60DX)	NP9A	MA01391	POWER HEAT SINK HP1X A1100P-H14
N200B	KQ00741	DELTA 78 A/B ASS RGB (50/60DX)	NQ92	MC00104	HEAT SINK P10 H45 19 A6063S-75
N200B	KQ00811	CPD38 LENS AB ASS'Y 43GX	P001	2902261	PLUG PIN SUB MINI 2P
N200B	KQ00161K	LENS SASS CPC B (50GX)	P801	2961141	2P PLUG PIN WITH BASE
N200G	KQ00741	DELTA 78 A/B ASS RGB (50/60DX)	P802	2661756	1P PLUG PIN WITH BASE
N200G	KQ00811	CPD38 LENS AB ASS'Y 43GX	P831	2961141	2P PLUG PIN WITH BASE
N200G	KQ00166K	LENS SASS CPC RG4 (50GX)	P832	2661756	1P PLUG PIN WITH BASE
N200R	KQ00741	DELTA 78 A/B ASS RGB (50/60DX)	P861	2961141	2P PLUG PIN WITH BASE
N200R	KQ00811	CPD38 LENS AB ASS'Y 43GX	P862	2661756	1P PLUG PIN WITH BASE
N200R	KQ00166K	LENS SASS CPC RG4 (50GX)	PB	2661756	1P PLUG PIN WITH BASE
N201	QR47631	HP11/12 INST.BOOK(ENG)#1	PCB	ED03174	4P MINI CONNE.PLUG TV-50P-04V3
N201	QR47641	HP11/12 INST.BOOK(FRN)#1	PCG	ED03174	4P MINI CONNE.PLUG TV-50P-04V3
N202	H462163	PTV WARRANTY CARD	PCR	ED03174	4P MINI CONNE.PLUG TV-50P-04V3
N202	H462781	WARRANTY CARD (F)	PDC	ED03205	9P 2.5MM PITCH CONNECTOR TAC-L09X-A3
N203	H462873	V-CHIP GUIDE HP11/HP12	PDF1	ED01592U	PLUG CP-03BP5R0VU-TBL-LOCK
N203B	3393751	DELTA 77 C-ELEMENT (50/60DX)	PDF2	ED01596U	PLUG CP-04BP5R0VU-TBL#2,3N
N203B	KQ00821	DELTA 38 C-ELEMENT B (43GX)	PDG	ED03212	15P 2.5MM PITCH CONNECTOR TAC-L15X-A3
N203B	KQ00111K	CPC-1 LENS (W) (50GX)	PDK1	ED01471U	PLUG 07BP1R2HUTWGP-A1

PRODUCT SERVICE NOTE: Components marked with a ⚠ have special characteristics important to sefety. Before replacing any of these components, read carefully, the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
PDK1	ED01491U	7P PLUG PIN	U402	GK00482	SP-12CMM EAST12PL17B6 43/50GX"
PDK3	ED01471U	PLUG 07BP1R2HUTWGP-A1	UFPK	AZ00163	CRX F-PACK MAYLAYSIA
PDK3	ED01491U	7P PLUG PIN	⚠ V1B	DE01913	CRT P16LTG00 BMB
PDK4	ED01471U	PLUG 07BP1R2HUTWGP-A1	⚠ V1G	DE01912	CRT P16LTG00 HHA
PDK4	ED01491U	7P PLUG PIN	⚠ V1R	DE01911	CRT P16LTG00 RFA
PDKP	ED01472U	PLUG 11BP1R2HUTWGP-A1	W811	2692464	CO-01C-N0R0-821FOCUS
PDKP	ED01492U	CONNECTOR 11BS1R2VUTWGX-A1	W841	2692463	CONNECTOR FOR FOCUS
PDKS	2959051	PIN POST (2P)	W871	2692463	CONNECTOR FOR FOCUS
PDKS	2959051	PIN POST (2P)			
PFC	2902263	PLUG PIN SUB MINI 4P (43/50GX ONLY)			
PFS	2902268	PLUG PIN SUB MINI 9P			
PFT	2902251	11P PLUG PIN			
PJIG	2902266	PLUG PIN SUB MINI 7P			
PL2	ED03175	5P MINI CONNE.PLUG TV-50P-05V3			
PMB	ED01597U	PLUG CP-06BP5R0VU-TBL#3,5N			
PMG	ED01597U	PLUG CP-06BP5R0VU-TBL#3,5N			
PMR	ED01597U	PLUG CP-06BP5R0VU-TBL#3,5N			
PP	ED03173	3P MINI CONNE.PLUG TV-50P-03V3			
PP01	ED01851	PLUG 5289-2A			
PP31	2661751	2P PLUG PIN WITH BASE			
PPD1	ED02801	2P PLUG PIN			
PPS1	ED01852	PLUG 5289-3A			
PR2	ED03174	4P MINI CONNE.PLUG TV-50P-04V3			
PSD1	ED01471U	PLUG 07BP1R2HUTWGP-A1			
PSD1	ED01491U	7P PLUG PIN			
PSD2	ED01472U	PLUG 11BP1R2HUTWGP-A1			
PSD2	ED01492U	CONNECTOR 11BS1R2VUTWGX-A1			
PSD3	ED01472U	PLUG 11BP1R2HUTWGP-A1			
PSD3	ED01492U	CONNECTOR 11BS1R2VUTWGX-A1			
PSD4	ED01473U	PLUG 13BP1R2HUTWGP-A1			
PSD4	ED01493U	CONNECTOR 13BS1R2VUTWGX-A1			
PSD5	ED01471U	PLUG 07BP1R2HUTWGP-A1			
PSD5	ED01491U	7P PLUG PIN			
PST1	ED03216	20P 2.5MM PITCH CONNECTOR TAC-L20X-A3			
PST1	ED03196	20P 2.5MM PITCH PLUG TAC-L20P-A3			
PST2	ED03216	20P 2.5MM PITCH CONNECTOR TAC-L20X-A3			
PST2	ED03196	20P 2.5MM PITCH PLUG TAC-L20P-A3			
PST3	ED03216	20P 2.5MM PITCH CONNECTOR TAC-L20X-A3			
PST3	ED03196	20P 2.5MM PITCH PLUG TAC-L20P-A3			
PSU1	ED03216	20P 2.5MM PITCH CONNECTOR TAC-L20X-A3			
PSU1	ED03196	20P 2.5MM PITCH PLUG TAC-L20P-A3			
PSU2	ED03206	10P 2.5MM PITCH CONNECTOR TAC-L10X-A3			
PSU2	ED03186	10P 2.5MM PITCH PLUG TAC-L10P-A3			
PTS	2902261	PLUG PIN SUB MINI 2P			
PVM1	ED03206	10P 2.5MM PITCH CONNECTOR TAC-L10X-A3			
PVM1	ED03186	10P 2.5MM PITCH PLUG TAC-L10P-A3			
PVM2	ED03206	10P 2.5MM PITCH CONNECTOR TAC-L10X-A3			
PVM2	ED03186	10P 2.5MM PITCH PLUG TAC-L10P-A3			
PVMC	2902261	PLUG PIN SUB MINI 2P			
PY1	2959055	CONNECTOR-6P(PH)			
PY1	2959055	CONNECTOR-6P(PH)			
PY2	2902263	PLUG PIN SUB MINI 4P			
PY2	2902263	PLUG PIN SUB MINI 4P			
U401	GK00741	SP-16M EAST16P28A6 (50/60DX)			
U401	GK00482	SP-12CMM EAST12PL17B6 43/50GX			
U402	GK00741	SP-16M EAST16P28A6 (50/60DX)			

QUICK REFERENCE PARTS LIST

NO.	CIRC.#	PART NO.	DESCRIPTION	FUNCTION
1	IK01	CP07611	JHM7805FA	
2	IK02	CP01531R	ICL-PST9142-T	
3	IK04	CZ00431	STK392-110	CONVER OUTPUT
4	IK05	CZ00431	STK392-110	CONVER OUTPUT
5	I601	2003541	ICL-LA7838	V. OUTPUT
6	I901	CZ00861	STR-F6628(LF1352)	
7	I902	CP05431	ICL-TLP621	
8	I903	CP05431	ICL-TLP621	
9	I904	CP07731U	MIP0253PSCF	
10	I905	2381349	HYB-SE120N(LF12)	+B CONTROL
11	I907	CP05431	ICL-TLP621	
12	I923	CP07615	NJM7812FA	
13	I924	CP07665	NJM7912FA	
14	I921	CP07611	NJM7805FA	
15	I201	CK30941U	CXA2069Q	A/V SELECT
16	IA01	CK35271R	NJW1133M	
17	IA02	CK35451R	NJM2198M	
18	IA03	CK35281R	NJM2187M	
19	IA04	CP07751U	TDA7265	
20	IX01	CK07631R	TC90A45F	2 LINE COMB.
21	I001	CP07781U	MAIN MICRO	TV MAIN MICRO
22	I002	CK35893R	CAT24WX15J1	EEPROM
23	I003	CK35441R	MN1501XNRE	SW IC
24	I005	2000541	ICL-M51951BSL	
25	I301	CK09013U	UPD64082GF-EBA	3 DYC COMB.
26	I302	CK06097R	PST912YNR	
27	I303	CK35321U	MSM514264E-60JS	
28	I304	CP04232	BA033T	3.3 V REG.
29	I401	2004751	ICL-TA820AH	
30	IC501	CP03552U	TA1222BN	VIDEO/CHROMA
31	IC502	CK35501R	NSM2284M-TE1	
32	IC503	CK35441R	MM101XNRE	
33	IG02	CK35341U	SDA9589X	
34	HM01	CZ00641	GP1U281Q	
35	I504	CP07611	NJM7805FA	
36	I505	CP07614	NJM7809FA	
37	UKDG	CS00441	HC2141-ASS'Y	9POINT ADJ.
38	UKDG	CS00442	HC2142-ASS'Y	MAGIC-S
39	U101	HC00511	F-E-ENGE6106D	MAIN F/E
40	U102	HC00462	R-E-ENG35514G	SUB F/E
41	EANT	HP00771	ANT SW BOX	ANT SW BOX
42	EANT	HP00351	UNXBT12-0001	ANT SPLITER

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